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LECTURES
ON
COMPARATIVE ANATOMY
AND
ANIMAL PHYSIOLOGY,

DELIVERED BY

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LECTURE XXXVIII.

ON THE NERVOUS SYSTEM OF THE VERTEBRATA.

By a series of metamorphoses and developments in the nervous system of the invertebrated classes, we have seen its great centres accumulate around the œsophagus, and rise at length above the canal where it extends in a longitudinal direction in the cephalopods, with its cerebral ganglia enclosed in an organized cartilaginous cranium. This supra-œsophageal position it preserves throughout the rest of the animal kingdom to man, with its axis protected by an organized internal skeleton. As in the naked cephalopods, we see in the lowest cartilaginous fishes, in the long cylindrical bodies of the *lampreys*, the *myxine*, and the *gastrobranchus*, two slender nervous cords, extending along the middle of the back, and scarcely protected externally by a cartilaginous covering, which, however, is continued in a more solid form over their cerebral ganglia, and is here, as in the *sepia* and *loligo*, composed of a single piece. This first vertebrate condition of the nervous system, met with in the lowest fishes, with scarcely a trace of the cerebellum yet perceptible, presents the embryo form of that system in man, and in all the higher classes of vertebrata, but in fishes it does not fill the cavity which contains it, as it does in the higher animals. We have seen that fishes require great extent of surface on the outside of the cranium, for the attachment of the numerous and powerful muscles of the vertebral column, the lower jaw, and the opercular bones. They require much greater surface without than their small brain requires within, as we see in many air-breathing animals, such as the owls and the elephants, where the outer surface of the skull is extended by inflating the diploe with that light element which they breathe. But fishes, inhabiting and breathing a denser aquatic element, and having little diploe in their thin squamiform bones, have the outer surface of the skull enlarged by the deposition of a fluid within its cavity, in the cellular tissue of their developed arachnoid coat. This colourless glairy substance, cellular and semi-fluid, like the vitreous humour of the eye, occupies a larger space in the cranial and vertebral cavities than the spino-cerebral axis itself, and is placed, as usual, between the *dura mater* which lines the interior of the bones, and the *pia mater* which immediately invests all the contained parts of the nervous system, and lines their interior cavities.

These longitudinal dorsal columns, so small in the vermiform cyclostome fishes, become reinforced in the more developed bodies of the osseous fishes, by the numerous motor and sensitive filaments derived from the periphery of the body, and are enclosed in a solid osseous canal formed by the two peri-vertebral elements, and the cyclo-vertebral element, or body of the vertebræ. The two opi-vertebral elements above, like the two cata-vertebral elements below, being here devoted to the vertical extension of the trunk for progressive motion, the lower canal for the vascular system, immediately below the cyclo-vertebral element, is formed solely by the two para-vertebral elements, and the body of each vertebra. Small as the superior foramina of the vertebræ are in these osseous fishes, formed by the peri-vertebral elements, compared with the inferior foramina, formed by the para-ver-

tebral elements, they are not filled by the columns of the spinal chord. These nervous spinal columns are covered, like the brain itself, with the semifluid cellular arachnoid, which continues forward to the cranial vertebræ. The spinal chord and medulla oblongata are yet small compared with those parts in superior classes, but they are large when compared with the cerebral contents of the cranium, which these nervous bundles develop. The spinal chord is nearly equal in its development throughout the vertebral column, from the smallness of the arms and legs not yet requiring those great enlargements which we see in higher animals, where the large nerves of the extremities are given off; but in the *rays*, and similar forms where the arms are very large and powerful, the anterior enlargement of the spinal chord is conspicuously developed, and presents a lobed appearance at the origins of all these brachial nerves in the common *piper* of our coasts, the *trigla lyra*. It generally continues tapering along the spinal canal, and exhibits very slight enlargements, in its course, at the double origins of the symmetrical spinal nerves. The intervertebral ganglia are yet very small on the posterior or sensitive roots of these compound spinal nerves. The median line of separation, both before and behind, between the right and left columns of the spinal chord, is here obvious, and also the lateral lines corresponding with the origins of the two sets of nerves; but the crossing fasciculi of the corpora pyramidalia are but slightly marked in the medulla oblongata, as also the various commissures of converging fibres are yet but imperfectly developed within the cranium. The three great fasciculi of the medulla oblongata, the *corpora pyramidalia*, the *corpora olivaria*, and the *corpora restiformia*, the roots of the cerebral hemispheres, the optic lobes, and the hemispheres of the cerebellum, are already marked, but unequally developed in fishes, for while their optic lobes are proportionally very large, the cerebral hemispheres are very small, and scarcely do we find the lateral parts or hemispheres of the cerebellum yet begun to be developed in the osseous fishes. By the continued growth of the skeleton, while that of the spino-cerebral axis is retarded, we often find the spinal chord drawn up towards the head, and the long nerves of the cauda equina occupying all the inferior part of the vertebral canal, as we see remarkably in the moon-fish, the *tetrodon mola*.

The medulla oblongata, the origin of most of the cranial nerves of vertebrata, is here large and lobed, and nearly as broad as the cerebral parts before it in the cranium. It is marked above by a *calamus scriptorius*, at the bottom of the fourth ventricle, which is placed between it and the single median lobe composing the cerebellum. The commissures are the principal parts defective in the spino-cerebral axis of the lowest vertebrata, and in fishes we cannot perceive either a crossing of fibres in the corpora pyramidalia, or the great cerebellic commissure, the pons varolii, or the cerebral commissure, the *corpus callosum*. The magnitude of the spinal chord and medulla oblongata in fishes, compared with the brain and cerebellum, corresponds with the early and great development of those parts in the human embryo, and their want of the middle and posterior enlargement corresponds with their non-appearance in man, before the arms and legs are developed from the sides of the trunk. The cerebellum in the osseous fishes is composed not of the lateral hemispheres of that part, but of the median vermiform portion which forms a small round or tongue-shaped lobe, or a single transverse band, undivided on the median plane, and is almost entirely wanting in the lampreys. When cut into vertically, in the middle, it presents a distinct white nucleus, from which white fibres are seen to radiate to the circumference, but there are yet no transverse striæ, or laminated appearance, on the outer surface, as we see in the cerebellum of higher animals. From the fourth ventricle, which is beneath the small undivided median cerebellum, there is a canal of communication leading to the common ventricle of the two optic lobes, or undivided corpora quadrigemina. This median portion of the cerebellum is also in the human embryo the portion first developed before its lateral hemispheres, and it then presents a smooth surface, without transverse laminæ, as in the osseous fishes. In the highest cartilaginous fishes, as the rays and sharks, not only are the lateral hemispheres of the cerebellum already begun to be developed, but the large median vermiform portion has become transversely laminated, as in higher animals; no trace of convolutions, however, are seen on the brain of this or any other vertebrated class below the mammalia. Now it is well known, that in the human embryo this laminated or folded appearance is also seen on the surface of the cerebellum before the convolutions begin to be formed on the hemispheres of the brain.

Anterior to the medulla oblongata in osseous fishes, there are generally three pairs of rounded lobes, placed in front of each other along the floor of the cranium, and occupying but a small part of that

capacious cavity, as you observe in the skull of the eel, where they are more equally developed than usual. The posterior pair are the optic lobes, which give origin to the principal fibres of the optic nerves; they are the corpora quadrigemina of the brain of man and mammalia, where they are each divided into two by a superficial transverse sulcus, which does not present itself on these lobes in oviparous vertebrata. The second or middle pair of lobes are the small hemispheres of the brain, which acquire so great a magnitude in higher classes. And the anterior pair are the olfactory tubercles, appropriated exclusively to the olfactory nerves. All these lobes vary in their magnitude, in different fishes, but the optic or posterior lobes are the most uniform in their appearance; the middle pair or the cerebral hemispheres vary much more, and the most variable in their form and magnitude and position are the anterior pair or olfactory tubercles.

The optic lobes or corpora quadrigemina in most fishes are larger than the hemispheres, smooth and cineritious on the outer surface, white within; and, like those parts in the human embryo, they are hollow within, and without any transverse sulcus to divide their surface. The ventricles within these optic lobes communicate with each other, and they communicate, by the narrow canal or aqueduct behind, with the fourth ventricle, beneath the small cerebellum. Their inner white parietes meet above on the median line, as by a corpus callosum, and at their median line of junction they descend and form a prominent ridge, but no complete septum between their ventricles. These optic lobes, like the medulla oblongata, are here larger in proportion to the hemispheres of the brain than in all the higher vertebrata, and they have the same great proportions the earlier we trace them back in the human embryo. The fibrous structure and the direction of the component fasciculi can be perceived on the interior white lining of these smooth lobes. Their development is directly proportioned both to that of the optic nerves and the corpora olivaria, but is in the inverse ratio to that of the hemispheres of the brain, and the hemispheres of the cerebellum.

Anterior to the optic lobes are the hemispheres of the brain, smooth, round, and cortical on the surface, solid within, destitute of convolutions, and in almost all the osseous fishes they are less than the optic lobes. They yet contain no ventricles within them, and that is the case also with the earliest condition of the hemispheres of the human embryo. Those cavities are first manifested in the corpora quadrigemina or optic lobes of the human brain, and at a later period they are developed in the hemispheres themselves.

In some of the more perfect of the cartilaginous fishes, as the rays and the sharks, the hemispheres acquire a very great size compared with the optic lobes; they become larger than the optic lobes, and they are then found distinctly to have the lateral ventricles already developed within them. Anterior to the hemisphere, you will observe in these osseous fishes that there are two other small lobes; those are placed at the commencement, generally, or in the course of the olfactory nerves, and they are thence called the olfactory tubercles. In the highest cartilaginous fishes these olfactory tubercles are placed, as you observe in the rays, at a great distance in front of the cerebral hemispheres, at the extremities of prolonged peduncles, where they are remarkably extended transversely, and exceed the magnitude of the hemispheres themselves. There they are situated immediately above the cribriform plate of the ethmoid, which the olfactories perforate, to be distributed on the extensive pituitary membrane covering the laminæ of the nose. These tubercles have generally no cavities within them, but the cerebral hemispheres have already ventricles developed within them, in the sharks and the rays, at the same time that the usual ventricles continue in the optic lobes. In the solid hemispheres of the osseous fishes we see a white fibrous centre, radiating white bands forwards, and upwards, and laterally, through a thick superficial covering of cineritious or gray matter. They appear like the thalami behind the corpora striata in higher classes.

All these lobes contained within the cranium of fishes vary much in the different species, not only in their relative size and their degree of internal development, but also in their outward form and respective positions. The medulla oblongata is often so large as to form two lobes behind the cerebellum, as you see in the *perch* and the *lophius*, and sometimes it is more uniformly extended laterally, as in the *skate*. The cerebellum, which forms only a very minute transverse band in the lampreys, is enlarged in the osseous fishes, rises vertically compressed between the optic lobes and medulla oblongata, and is prolonged a little backwards, but still consisting only of the vermiform portion, without a trace of its lateral lobes or its laminated surface, as you observe in this perch. In the sharks and rays, however, you perceive the cerebellum at its maximum of development in fishes; it rises high, and is broader than the medulla oblongata; it

not only extends backwards over the medulla oblongata, but also forwards over a great portion of the optic lobes. It is deeply sulcated transversely on the surface, and its lateral hemispheres already begin to extend, like little tubercles, from its base. The inner white fibres of the optic lobes are directed transversely, and arch upwards over the contained ventricles, but the exterior fibres pass longitudinally forwards to the optic nerves. In many of the lower fishes, the optic lobes are equal in size to the cerebral hemispheres, as you see in the eel and the turbot, or even exceed the hemispheres in bulk, as you see in the cod and many similar osseous fishes; but in the higher forms of cartilaginous fishes, where these parts approach to the reptile condition, their proportions are greatly diminished when compared with the hemispheres, or with the cerebellum, or even with the medulla oblongata; and they begin to assume an inferior position by the other parts rising and extending over them, as we see to take place with the corpora quadrigemina during the development of the brain in the human embryo. It is only in the more advanced states of the mammalia that these optic lobes become quadrigeminous, by a sulcus crossing the surface of each lobe transversely, and they are then without internal ventricles, they have a solid condition internally, and a divided surface externally, which they preserve in all the higher forms, to man.

The minute embryo form of the cerebral hemispheres seen in the cyclostome and lowest osseous fishes, where they are only small solid ganglia in front of the optic lobes, is changed for a much more advanced condition of development in the plagiostome fishes, where they have become large, broad, elevated lobes, united on the median plane, partly extended over the small optic lobes behind, broader than all the other cerebral parts within the cranium, and already containing ventricles in their interior. They already present two white fibrous commissures, connecting these hemispheres with each other; but in most of the osseous fishes we can only perceive one white, small, transverse nervous band at their base, passing from the one solid hemisphere to the other, and showing their analogy to the thalami optici. The olfactory nerves come out from the lower part of those hemispheres, and pass through the olfactory tubercles, which, though apparently connected with each other, are only in contact, and have no nervous filaments passing from one to the other. Cuvier considered these hollow optic lobes as analogous to the cerebral hemispheres of higher classes, while Gall and Serres regarded them as the corpora quadrigemina. Behind these optic lobes, on the lower surface of the brain, we observe the large optic tubercles, and in front of these, on the same surface, the large pituitary gland which receives the end of the infundibulum. Behind the optic lobes we see the pineal gland, as in all the higher classes.

From the magnitude of the olfactory and the optic nerves of fishes, and also of the fifth pair, and the smallness of the three pairs of lobes from which these originate, the cerebral hemispheres, the optic lobes, and the medulla oblongata, appear only like small ganglia appropriated to those nerves; but all the other pairs of cranial nerves can already be distinctly traced. The *par vagum* is seen arising from the sides of the medulla oblongata. The great sympathetic, arising here from the fifth pair, is reinforced by branches from the spinal nerves, and forms minute ganglia, as usual, before being distributed on the organs of the trunk. Thus you observe, in this lowest vertebrated class, the nervous system has acquired a form and development where we can recognise all the essential parts of that system which occur in man; but in their most perfect forms in fishes they still retain only the transient embryo-forms which they present in the human body.

The metamorphosis of the *amphibious* animals changes the condition of their nervous system from that of the fishes to nearly that of the reptiles above them. In their larva state, and in those which retain the gills, the spinal chord, the medulla oblongata, and all the parts contained within the skull, present that simple condition which we have seen the osseous fishes to preserve as permanent characters. Their spinal chord is yet small, tapering, lengthened into the coccygeal region, and without perceptible enlargements, where the nerves come off to the arms and to the legs; their medulla oblongata is broad and lobed the cerebellum without rudimentary hemispheric tubercles, and very small; the optic lobes are proportionally large, with distinct ventricles, and are quite exposed, and the cerebral hemispheres are without ventricles, and remarkably small. In one day's time a marked change is observed in the proportions of those parts; the hemispheres become sensibly enlarged laterally and upwards, now extending backwards, encroaching upon the optic lobes; the optic lobes are observed, consequently, to be diminished in relative size, from the increase which the hemispheres, composed at first almost solely of gray matter, have manifested in their development. No trace of depressions or convolutions, or

of internal ventricles, are seen in those cerebral hemispheres in this condition, nor in any condition of those amphibious animals. The convolutions, indeed, of the hemispheres of the brain do not manifest themselves even in the reptiles or the birds, but begin in the mammalia. In the tadpole condition of those amphibious animals, there are neither anterior nor posterior extremities developed. There is no reason, therefore, for there being an increase of development on any particular portion of the spinal marrow; hence it is that it retains that equality throughout which we see so remarkable in serpents and in most fishes. The middle enlargement, corresponding with that position from which the nerves of the arms are given off, has not yet manifested itself. The posterior enlargement corresponding with that part from which the nerves of the posterior extremities are given off, does not yet manifest itself; but as those extremities bud out from the sides of the body, those two parts of the spinal marrow manifest an evidently increased size. The posterior end is a little enlarged, for the cauda equina. The anterior termination has always an increased size, from its being the principal origin of nerves. So this medulla oblongata we see to be lobed and large proportionately also in fishes, for the same reason. The hemispheres in those amphibious animals, even in their adult state, have no cavity within them, and the ventricles are still manifested in the optic lobes or the corpora quadrigemina. During the development of those amphibious animals, we perceive great changes in the osseous covering of the nervous system, which we have already considered. The nervous system undergoes corresponding changes. We observe that at first it passes down through the numerous prolonged coccygeal vertebræ, but in proportion to the great development and growth, and consequent extension, of the dorsal vertebræ, the spinal marrow appears to shrink upwards from the region of the sacrum and the whole region of the coccyx. The coccygeal vertebræ become filled up, anchylosed, and form one cylindrical solid bone. Now you observe that there is thus a considerable distance between the intervertebral ganglia and the origins of the two sets of nerves of the spinal marrow in the adult condition of those animals, especially at the posterior part, which has been most influenced by the changes effected during the metamorphosis.

We cannot witness this phenomenon in the amphibious animals, this retraction of the nervous system during the passage of the larva to the perfect state, without perceiving that it corresponds remarkably with what is known to take place in the human spinal marrow during the development of the embryo. At first the coccygeal vertebræ are numerous, and the tail projects as in the tadpole; there are no extremities which bud as yet from the anterior or posterior part of the trunk. The head and anterior part of the body are enormously enlarged, on account, especially, of the rapid shooting of the brain through the phases of its development in that being whose development in this part of his structure is so far to transcend all inferior animals; but, still, in the posterior part of the trunk we observe that the coccygeal vertebræ are somewhat in the extended condition of those of the tadpole, and that during the rapid development of the vertebral column, the spinal marrow is drawn as it were upwards by the development and extension of the bones downwards, a change similar to that which we see in the metamorphoses of these amphibia.

The nervous system of *reptiles* manifests an increased development of the hemispheres of the brain, and of all that portion of the nervous system contained within the cranial cavity. The cerebellum has always been remarked for its smallness in the reptiles, and it had been thought by Cuvier that that corresponds with the slow movements and the languid irritability of their whole muscular system. In the serpents, where there are no anterior or posterior extremities, where there is no reason for one part of the spinal marrow to be more enlarged than another, we perceive scarcely the least indication of the middle or of the posterior enlargements of the spinal marrow; the anterior, however, is of considerable size, and is the more obvious from the imperfect development of the cerebellums of the optic lobes, and the hemispheres. The ceneritious matter still preponderates over the fibrous white matter of the brain, as in the two inferior vertebrated classes, but to a less extent than in them.

We observe in the reptiles that the brain generally fills the cavity of the skull, so that the inner surface of the skull more nearly corresponds in its diameter and in its form with the forms assumed by the hemispheres, by the optic lobes, the cerebellum, and the portion of the spinal marrow contained within the skull—the medulla oblongata. But we have already seen that the cranial cavity occupied by the brain does not correspond with the outward form of the head, and that it forms only a small tubular cavity in the central part of the head. There is, therefore, no correspondence between the form of the head

externally in reptiles, in amphibia, or in fishes, and the form of the hemispheres or any other part of the nervous system contained within the cranium. We observe, therefore, that the development of the great nervous centres in those three cold-blooded classes of animals, cannot influence the proportions which the whole head bears to the rest of the trunk or of the body. In the earlier condition of fishes, the brain occupies a larger proportion of the cavity of the skull than in the adult fishes. This shows you that there has been, subsequently, an arrest of the development of the brain, while the osseous part of the skull has continued to enlarge; and that we saw was the more easily admitted of by the squamous form of the sutures which bound the different bones of the skull and now connect them; they shoot over each other for the most part, and continue to grow, with the same proportions to the rest of the body, through the whole of life. The brain, however, as the fishes advance to maturity, ceases to increase in bulk, and, consequently, the loose cellular arachnoid coat increases in its dimensions by the easy process of secreting a glairy fluid into its interstices,—the easiest means of keeping progress with the external form and growth of the whole skull, and the general increasing strength and muscularity of the whole body of the fishes; for it was necessary in these animals to have the outer surface of the skull constantly of great size, in order that an extensive surface might be afforded for the attachments of the vigorous muscles that act upon the trunk. Thus it is, then, from the smallness of their cranial contents, that these reptiles manifest a less dependence on their great cerebral centres for their vital functions, than we see in the hot-blooded birds and quadrupeds.

In reptiles, the olfactory tubercles are still smaller than in the inferior cold-blooded classes. The hemispheres, though much enlarged, are still smooth upon their surface; they present, generally, no cavities, and their interior presents an appearance of white radiating fibres, like the corpora striata. When you make a section of those hemispheres, as here, for instance, in the tortoise, you observe they present an appearance of that intermixture of white and cineritious substance on the anterior part, which you see in the corpora striata of the brain of quadrupeds, but there is still a large proportion of cineritious substance. The optic lobes in the reptiles are proportionally small, and begin to be partly concealed in front by the extension backwards of the posterior part of the hemispheres. The optic lobes, still single on each side, without being subdivided into two upon each side retain the cavities within them, which we see in the lowest fishes. Those cavities, as we saw before, are present also in the hemispheres of the brain in the most perfect of the cartilaginous fishes, such as the rays and the sharks, but not in the osseous fishes.

In the crocodiles we observe the hemispheres of the brain to manifest a greater development laterally, and altogether to be increased in proportion, when compared with those of the chelonian reptiles, where the hemispheres of the brain have a more lengthened form, and are remarkably narrow from the one side to the other. In the crocodiles, on the contrary, the hemispheres are comparatively short and broad, and approach very closely to the characters they have in birds. They do not extend backwards, so as to cover one half of the optic lobes; the optic lobes, much reduced in size, still retain cavities within them. No trace of convolutions is yet seen upon their surface. The cerebellum is always remarkably small in reptiles, considering their place in the scale between the amphibia and birds. It presents a development, both of its median portion and of its lateral hemispheres, even lower than that of the plagiostome fishes; and we have not yet come to animals where the corpus dentatum is perceptible, in cutting through any part of the cerebellum. That cineritious ganglionic part belongs to animals which have the lateral lobes or hemispheres of the cerebellum more distinctly developed than we find them in reptiles. The cerebral hemispheres have internally a striated appearance of white fibres radiating through the still very abundant cineritious covering; they appear like the corpora striata, while the hemispheres of fishes are more analogous to the optic thalami. There is yet no corpus callosum nor tuber annulare. The parts in the cranial cavity of reptiles most indicating an advanced development, are the large, broad, and elevated cerebral hemispheres with their contained ventricles and numerous white radiating fasciculi. The olfactory tubercles and the optic lobes have diminished in their proportions, which marks an approach to the higher classes; but the medulla oblongata has retained its bulbous appearance, and the cerebellum has preserved nearly its lowest condition among the osseous fishes. The whole of these parts are more compacted together than in fishes, and much more closely invested with their osseous covering. The parts of the brain, like the cavities of the heart, from being lineal, accumulate upon each other as they develop. The spinal chord is more constantly extended through

the spinal canal, not presenting in any of the species that singular, short, and truncated appearance which it sometimes presents in fishes, as in the moon-fish, at the anterior part of the vertebral canal, where it appears only like a short peduncle of the brain, giving origin to all the spinal nerves. The sensitive or posterior spinal nerves have now more conspicuous ganglia upon them, the spinal nerves come off more nearly opposite to the places of their respective destinations, and from the greater development of the legs and arms in most reptiles, the two corresponding enlargements of the spinal chord are more obvious. The lateral and the splanchnic ganglia of the sympathetic have become more distinctly marked, and these visceral ganglia have now a more intimate relation to the great arterial trunks, than they present in the class of fishes, where they are more indiscriminately placed in the cavity of the trunk than in the higher vertebrata, and, consequently, approach more to their condition in the molluscous and articulated classes.

The nervous system of *birds* presents a more elevated condition of the plan of structure already developed in the crocodiles and in the inferior reptiles; but the spino-cerebral axis now fills the osseous cavities which protect it, and the form and magnitude of the head now correspond with those of the cerebral contents of the cranium at every period of life. The cineritious substance has increased in the spinal chord, and the white fibrous portion in the brain. The olfactory tubercles have much diminished, but retain their tubular communication with the small ventricles of the hemispheres. The white fibres of the corpus callosum have begun to shoot across the upper part of the united hemispheres of the brain. The cerebral hemispheres and the median portion of the cerebellum have chiefly increased in size. The whole contents of the cranium, now confined in a small space, are more collected together into a rounded form, and the hemispheres thus extending backwards have covered the optic lobes, and come into contact with the cerebellum. The white striated appearance has increased in the hemispheres, where we now perceive both the thalami and the corpus striatum, and these diverging fasciculi, arching upwards and inwards, cross the median plane, to form the rudiment of the great superior commissure or corpus callosum of the mammalia. The great development of the hemispheres allows only a small part of the optic lobes, or corpora quadrigemina, to be visible on their back part. The cerebellum in birds is of great size, and when contrasted with the condition of that part in reptiles, presents a striking character of increased development. Not only is its median vermiform portion of great size, but we observe that its lateral portions or hemispheres have now acquired an increased development, and that the surface of the cerebellum now distinctly exhibits those transverse sulci that dip into its interior, which we see characterizing this part in the mammalia; so that when you make a section perpendicularly downwards through the cerebellum of the bird, you have very beautifully presented to you that appearance of the arbor vitæ, the appearance of admixture of gray matter with white fibrous structure, seen by cutting the cerebellum in the human brain; but there is yet no corpus dentatum. This great development of the cerebellum corresponds with the great muscular development, and the powerful muscular motions, and the great activity of the class of birds. The optic lobes, though reduced much in size, still retain their cavities within them. The hemispheres are, for the most part, quite smooth upon the surface, contain very small cavities, and have the proportion of their cineritious matter much reduced by the greater development of the white fibres.

Now in consequence of the development of the anterior and posterior extremities in this class, we observe that both the posterior and the middle enlargements of the spinal marrow are distinctly manifested in the course of the spinal marrow. The posterior enlargement is remarkable in birds for its magnitude and its ganglionic form and structure. This greatly increased bulk appears partly to depend on the high or advanced situation which it occupies in the trunk of birds, and the number of nerves which have, consequently, to be sent out from that part to supply the posterior region of the trunk, as well as the large and long posterior extremities. Thus it is that we find the sacrum, which you know comprises a great portion of the vertebral column in birds, to present its internal spinal canal exactly opposite to the two cotyloid cavities suddenly increased to a great magnitude in every direction, like a cranial cavity.

Those birds which are observed to have the wings but imperfectly developed, and the legs very powerful, as the *ostrich*, the *rhea*, the *emeu*, the *cassowaries*, and several others, have the middle enlargement of the spinal marrow remarkably small, and the posterior very large, presenting a striking contrast with the appearance of those parts in some of the diurnal rapacious birds, where the anterior extremities are enormously developed and muscular,

to support them long in the air, and to enable them to move with great velocity through that medium in pursuit of their prey. This law of increment, however, we find to hold generally with regard to these spinal enlargements in all the vertebrated classes. GALL early pointed out, however, that not merely is this enlargement of the spinal chord observed where the great nervous trunks going to the extremities are given off, but that where every pair of nerves comes from the spinal chord, the gray matter within that portion of the spinal columns on each side exhibits a proportional enlargement. From the extreme smallness of these numerous successive enlargements at the origins of the spinal nerves, they are more difficult to perceive, and have consequently been questioned by many. The great sympathetic has now arrived at a high degree of development, and the ganglia on the sensitive nerves of the spine have increased in size, and approached more closely to the roots of those posterior nerves than in the inferior classes. The medulla oblongata is less suddenly enlarged, and the fourth ventricle is prolonged into the cerebellum. From the very imperfect development of the lateral hemispheres of the cerebellum, their great commissure of converging fibres, the tuber annulare, or pons varolii, is still deficient, but the great development of the cerebral hemispheres, and their more intimate union on the median plane, are here accompanied by the first development of the great superior commissure of the cerebral hemispheres, the corpus callosum.

In the *mammiferous* animals the same march of development, but to a higher grade, is perceptible in every part of the nervous system, in the magnitude and extension of the spino-cerebral axis, in the methodical distribution of the great sympathetic, in the increased number of cineritious deposits in all parts of the fibrous medullary system, in the increased magnitude and approximation of all the ganglia on the symmetrical sensitive nerves, and in the more complete union of all the cerebral parts by means of various commissures of converging fibres. These converging fibres are conceived by LAURENCET to be continuous with the diverging system, and to form, in their descent from the cineritious covering of the brain, not only the various commissures, but also the cerebellum and the posterior or sensitive columns of the spinal chord. We can scarcely perceive the corpus callosum, the great commissure of the cerebral hemispheres, in the oviparous animals. The anterior and posterior commissures are yet remarkably small, and the great commissure of the cerebellum, the tubular annulare, or the pons varolii, you can scarcely perceive a trace of in any of the vertebrated animals below the mammalia. As we ascend to the mammalia, and rise through the mammiferous animals to man, those great commissures, composed of the converging system of fibres, whatever be their functions, are the parts where we observe the most marked signs of increased development. It is not alone in the increased magnitude of the surface of those great centres of the nervous system, it is not in the number of those enteroid processes of the brain, as the convolutions have been called by ROLANDO, that we observe the most marked characters of superiority in the nervous system of mammalia, but in the complicated internal arrangements of the fibres, in the texture of the brain, and in the extensive distribution of these mysterious instruments in every part of the body. The cineritious matter is now least abundant over the cerebral hemispheres proportioned to the white fibres within, and is at its maximum of development in the medulla spinalis, and in detached ganglionic portions throughout the course of the spino-cerebral axis, as in the medulla oblongata, the pons varolii, the hemispheres of the cerebellum and of the brain. The great sympathetic is also at its maximum of development in mammalia, by which the greatest unity and dependence are established in all the organs of the body. The number, and magnitude, and cineritious or cerebral character, of the ganglia of the great sympathetic, and the extent of distribution of this system through the body, are greatest in this class, as well as are its extent of connexion with the spino-cerebral axis, and its degree of appropriation to individual organs. The periphery of the body is here the most largely supplied with symmetrical nerves of motion and sensation which arise from roots the most approximated to each other, and the great central columns of those different nerves are here the most intimately united to each other in every part of the axis.

The spinal cord of the cetacea, like that of the human embryo and the tadpole, extends into the coccygeal region, and tapers equally, as in them, from the want of legs, to the cauda equina, destitute of its posterior enlargement. It shortens in superior orders, till it is confined to the moveable vertebræ of the trunk. How different is the posterior enlargement of the jerboa and kangaroo, where the legs are disproportionately large and the arms small, when contrasted with that of the bats, where the powerful arms alone carry the carcass

through the air! The cerebellum is large in the rodentia, and the hemispheres of the brain are small, and destitute of convolutions, as in birds; the cerebral hemispheres continue small, and the corpora quadrigemina large, in the feeble herbivorous quadrupeds, when contrasted with the opposite characters those parts present in the more powerful and sagacious carnivora. It is also in these low vegetable-eating quadrupeds that we find the reptile condition of the large hollow olfactory tubercles communicating with the cavities of the lateral ventricles, and the cerebral hemispheres short as a bird's, though convoluted on the surface, and not developed backwards over the cerebellum, nor so far laterally, as they are in carnivora. It is a wise and beneficent arrangement to place these herbivorous quadrupeds thus low in the scale of intellectual development. They are destined to consume vegetable matter, to convert it into animal matter, to help on the development of organization on this planet, to serve as the prey and as the food of the more wily, more sagacious, and more intelligent carnivorous species, which must seize, and destroy, and devour them, or perish and leave a blank in the creation, and so disturb the balance of the species. Therefore it is that we observe that the face of herbivorous quadrupeds is large compared with their cranial cavity; that they have large ears, large eyeballs, and large organs of the other senses which the face contains and protects, but that in those which are destined to way-lay them and to destroy them, the organs of the senses are less developed in bulk, but the nervous centres are more so. They must plan and watch, and perform numerous complex intellectual operations to enable them to way-lay, to ensnare, and to seize their prey, which nature has formed them for consuming and digesting, and which has provided them with instruments of destruction, and with instincts suited to their use. In herbivora, the whole bulk of the optic lobes is greater than in carnivora, but the anterior corpora quadrigemina are large and the posterior small. It is the reverse in carnivorous quadrupeds, for in them the anterior of the corpora quadrigemina are small, and the posterior or the testes are large. Man holds a medium between the two, which shows that the development of those anterior and posterior corpora quadrigemina, or anterior and posterior portions of the optic lobes, taken separately, does not correspond with the degree of development of the whole hemispheres of the brain.

Now we observe that those superficial convolutions become deeper and more numerous, and the hemispheres, both of cerebrum and cerebellum, larger, as we ascend through the carnivorous quadrupeds, and the quadrumanous animals, to the human species. The hemispheres extend backwards, so as to cover the whole of the cerebellum, in the higher quadrumana; as yet, however, they do not extend backwards beyond the posterior margin of the cerebellum, which they do in the human brain to the extent of more than half an inch. On looking at the interior, at the lateral ventricles of the brain, or those interstices that are left between the systems of converging and diverging fibres, we observe that there is a difference betwixt the lateral ventricles in man and those of inferior mammalia. In man they shoot backwards into the posterior lobes of the brain. Those posterior cornua of the lateral ventricles have a small hippocampus, the *hippocampus minor*, that extends into them; but when we examine this part of the hemispheres in the inferior quadrumana, we observe that all outward marks of the posterior lobes disappear, and that the posterior cornua of the lateral ventricles are wanting, and that no trace of the hippocampus minor is to be any longer discovered, though the fibres that composed it exist in a different external form. Now we observe that there is thus a gradual approach to the human form in those great nervous centres in the orangs of India and Africa, which corresponds with the great enlargement of their whole cranial cavity, the magnitude of their facial angle, the smallness of their face, and their high degree of intellectual development.

As those cerebral parts are developed, in all the vertebrated classes, chiefly from the three great bundles of nervous filaments that compose the medulla oblongata and the spinal marrow, we should necessarily expect to find a correspondence between the development of those three bundles of nervous filaments and the three principal parts of the brain—the hemispheres, the optic lobes, and the cerebellum. Thus as we see that the principal fibres which compose the hemispheres of the cerebellum are derived from the *corpora restiformia*, or those great bundles of nervous filaments which lie at the posterior part of the medulla oblongata, we should expect to find, as we do, that in proportion as the *corpora restiformia* are developed, the hemispheres and the cerebellum manifest in all the classes a proportional enlargement; and *vice versa*. As the *corpora olivaria*, or those nervous bundles that are placed at the sides of the medulla oblongata, chiefly form the optic lobes, we should expect to find that in proportion as the corpora

olivaria or middle fasciculi are developed, so should the optic lobes be developed; and when the optic lobes, the optic nerves, and the eyes, are larger in animals, the corpora olivaria are found to have a proportional increase of size. The *corpora pyramidalia*, which compose the anterior of the great columns of nervous fibres of the medulla oblongata, shoot forwards through the pons varolii and through the crura of the brain, and compose the greater part of those cerebral hemispheres. In proportion, therefore, as we find these great anterior columns, the corpora pyramidalia, developed, we observe a corresponding magnitude of the cerebral hemispheres in the vertebrated animals. The optic lobes we have seen greatest in proportion in the lowest animals, and least in the highest, and the same with the olfactory tubercles; but the cerebral hemispheres and the lateral hemispheres of the cerebellum have gradually advanced with the general march of development; and the brain of man, the instrument of all his intellectual operations, in mounting from its embryo to its adult condition, passes through every phasis of development presented by the inferior vertebrata.

CASES OF

STONE IN THE BLADDER.

LITHOTOMY.—NEW DIRECTOR.

To the Editor of THE LANCET.

SIR,—I beg to enclose some original practical remarks on a new director for the knife in the operation of Lithotomy, which although it may not be quite satisfactory to persons who have only studied the point theoretically, will, I think, interest practical men. In the hope that it will meet with the approbation of the profession, I shall be happy to transmit you a drawing of the instruments on an intimation to that effect. I remain, Sir,

Yours faithfully and respectfully,

GEORGE WALTER JAMES,
Surgeon.

Great Hampton-Street, Birmingham,
June 21st, 1834.

CASE I.—Mrs. Martin's son, Darlaston, aged four years, had been labouring under the symptoms of stone for more than twelve months, from the present time (July, 1829). The early indications were not noticed by the mother. I directed the child to be kept as quiet as possible, and on milk diet for one week previous to the operation, and a full dose of castor oil to be given the day before. On the following morning the bladder was injected with a mixture of warm milk and water, and the operation performed in the usual manner, with the common gorget and staff. The stone extracted weighed nearly three drams. No unfavourable symptoms occurred afterwards; the wound healed in about three weeks, since which period the child has continued quite well.

CASE II.—James Fisher, aged 43, consulted me on the 10th of March, 1831. Stated that he had been afflicted very severely with the symptoms of calculus more than two years; and, latterly, had been quite unable to work, or to remain in bed during the night, in consequence of troublesome micturition. At this time, probably aggravated by a nostrum called "Constitution Water," he suffered much pain in voiding his urine, which was cloudy, and deposited a purulent sediment. This patient was of a gross habit, and had, it appeared, been much addicted to ale-drinking, the alleged anti-lithic virtues of which were not, it appeared, evinced in this instance.* Having carefully sounded and ascertained the existence of stone, the usual preparatory means of strict quietude, purgatives, and a light diet, were strictly enforced, and the 24th of March was fixed on for the operation. An active enema was administered early in the morning of that day, and after its full operation an effective dose of opium, in order to support his resolution to undergo the operation.

On introducing the catheter for the purpose of injecting the bladder, it audibly came in contact with the stone; the staff being then passed, and resting on the calculus, a free incision was made into the groove, which being bared to the requisite extent, the largest-sized gorget was carried forwards into the bladder. There was some difficulty in the extraction, arising from the figure of the calculus, which was very wide and long,—but by depressing its left edge into the axis of the wound, it was withdrawn. It was of a whitish-yellow colour, and although of light specific gravity, it weighed two ounces within twenty-five grains. There was considerable hemorrhage during the operation, and it was requisite to secure a large branch at the lower extremity of the wound. This hemorrhage was in a great measure induced by the man having secretly drunk half a pint of rum, besides some ale, before we arrived. The bleeding ceased after the extraction of the

* Vide marginal note, page 212, vol. 1, fifth edit. Paris's Pharmacologia.

stone. He fortunately enough ejected the contents of the stomach, after which a full dose of opium was given. He was directed to lie on his back, and to be restricted to gruel.

Second day. Has passed a good night; pulse 100; tongue rather furred; urine passes freely through the wound; has had severe rigors. *V.S. ad* ʒij; *Calomel.* gr. v, *statim sumend. et postea Ol. Ricini* ʒvj. Low diet, with toast and water. In the evening much relieved; no return of the rigors; bowels moved three times; pulse 112; tongue much coated, but moist; no abdominal tenderness. Refers all his pain to the region of the pelvis and wound. Urine continues to flow freely through the wound, which is not much altered in appearance. A poultice was applied; calomel gr. 1, and tartrate of antimony gr. ¼, every three hours; and an opiate at bed-time.

Third day. Slept well at times; pulse 116; tongue still furred; bowels quite open; urine still passes freely; wound begins to discharge; a little appetite. A purgative draught was ordered, with saline effervescents; a large-sized gum catheter passed into the bladder through the opening in the tract of the urethra. From this day he continued to mend, and became convalescent at the end of a fortnight. The wound healed, and the only circumstance which was in any way troublesome was the *stillicidium urinæ*, which, however, was completely cured in about a month by wearing a screw instrument to compress the urethra. The patient has enjoyed perfect health ever since.

Case III.—Nov. 6th, 1831. Chas. Lane, aged 41, has been afflicted with stone upwards of ten months, having great irritation and frequent micturition after exercise. The urine resembles a mixture of oatmeal and water, and lets fall a copious muco-purulent deposit. He is somewhat reduced; tongue furred, yet appetite tolerable. Was sounded, but as the calculus could not be distinctly felt, muriatic acid and opium were given for a short time, with occasional cathartics, by which the irritation was somewhat relieved. Mr. Stanley's catheter being introduced, and the urine drawn off, the stone was then perceptibly struck. The operation was performed with the lithotome caché. It required some time to seize the calculus, owing to its small size and the empty state of the bladder. The stone weighed only three drams and a half, and was about the size of a nut, but longer. The man's general health was soon apparently restored, but still the wound did not heal so readily as it usually does; it presented a glossy and rather œdematous appearance. The discharge was copious, but it was a week or more before granulations commenced; at length, however, it healed, and he returned to his friends at Tipton. I heard from the surgeon who attended the man afterwards, that he eventually died of disease of the lungs.

Remarks.

In the first of the foregoing cases no unfavourable symptoms appeared, which I attribute to the healthy state of the child, and no force being used in the extraction of the stone; for in that event there is always more or less of cuticular sloughing interfering with union by the first intention. In the second case, there is one fact worthy of notice, namely, that a stone weighing nearly two ounces, and of twice the diameter of the gorget, was extracted without enlargement of the wound by the knife; and the patient did well, although there must have been a considerable dilatation of the parts so as to admit of its removal. The free passage of the urine was proof of the direct course of the incisions, which is in general a favourable sign. Here it may be mentioned, that during my dressership under the late Mr. Abernethy, and under Mr. Earle at Bartholomew's Hospital, I remarked that this fact did not escape the notice of the nurses, and which, coupled with a few other symptoms, enabled them usually to give a correct prognosis.

In the last case I became more intimately acquainted with the advantages of the knife, and with the objections to the gorget and lithotome caché, and was impressed with the necessity of some modification of the instruments in general use. Upon a review of such instruments, I am not induced to find so much fault with the gorget as with the method of using it. On comparing it with the knife, which in any but practised hands must be extremely dangerous, or with the bistouri caché, which has only the advantage of cutting as a knife, I think that a safe and well-constructed instrument, combining, as far as possible, the excellences of all three, is still a *desideratum* with general practitioners. Previously to a description of the alterations I propose, I beg briefly to refer to some of the defects in the instruments usually employed.

The old sound or staff is objectionable from the length of its curve, and proves inadequate, unless the bladder be distended, and the patient in a recumbent posture. In the half-distended viscus, its apex would rest against its opposite side, and it would not be possible to force it down sufficiently low to strike a small

stone; and should the bladder be in a state of contraction, it would be so closely embraced by its *plicæ*, as to be nearly immoveable. On the contrary, I have found one with a shorter curvature, and more abrupt at its commencement, very useful, as it admits of complete rotation; and when the urine has been drawn off, by turning its point downwards, and suddenly pulling, or rather striking, it backwards against the prostate gland, the calculus has been palpably discovered, even after other methods had failed. I do not think unfavourably of the *partially closed groove*, which has been proposed to prevent the beak of the gorget slipping therefrom, especially if the grooved portion of the staff be made straight, which would obviate the possibility of its locking; and under this plan, I think it would be better to hold the staff in the median line, according to the method of *Scarpa*, the beak being made square, and so set as to make the section of the prostate gland at the most eligible angle. I should certainly prefer a gorget thus altered, to the ordinary lithotome caché, which has three principal objections:—1st, That it divides parts which are not necessary; 2nd, That the tract of the wound produced is of an unfavourable figure, being a triangle with its base towards the bladder, which favours infiltration; and, 3rdly, That unless the bladder be distended, its sides may be wounded, as the contents must be rapidly escaping during the division of the prostate gland; for unless its beak be passed some distance into the bladder, the blade cannot be expanded properly, if at all,—on the principle, that still and equal pressure may be made on the edge of a razor by the finger, without dividing the cuticle.

To do away with some of these disadvantages, I made the following alteration in this instrument, which, for the sake of distinction, may be called *the gorget caché*. It is of the shape of the lithotome caché, but double. The blades are so set as to cut outwards and slightly downwards, say at an angle of twenty-two degrees and a half. By adding a scale to the handles, similar to the improved forceps by Professor Assalini, the exact extent of the incision, both as regards their length and breadth, is accurately known. The staff being withdrawn, after the introduction of the gorget caché, the spring is compressed, and the second incision commences where the first had terminated. There is an advantage, I think, in making the incisions from without inwards, for I strongly suspect that a second wound is often inflicted by the withdrawing of the lithotome caché. Here I beg to recommend the use of delicate reflecting curettes, to keep open the lips of the wound, the effect of which might be increased by a lamp and water reflector, and which, I conceive, would prove useful in all deep-seated operations, such as those in which the speculum-vagina, ani, &c., are employed. By the aid of these means, then, the preliminary incisions are rendered complete, and being made rather more horizontal than usual, the last is rendered, correspondent with them, of equal breadth throughout, and similar to that made by the knife.

The comparative success of Giltebrandt, Green, Hodson, and others, on the one hand, with the gorget; of Cheselden, Martineau, Lawrence, Earle, Key, and others again, with the knife; can by no means be deemed a criterion of the superiority of either instrument; it is merely an indication of the safety of those instruments in their respective hands, so that the superior merit of either must depend upon a full and extensive comparison of both. The knife, however, it must be confessed, has important advantages, provided it could be disarmed of the risk to which the patient is liable from want of caution or confidence in the operator. To guard against such risk I beg to submit the following modification of the staff to the consideration of the profession:—I propose, first, to have a staff, of good size, made hollow down to the groove, with a stop-cock attached, so as to allow of injection into, or evacuation of the contents of, the bladder, according as either should be deemed necessary; the groove to be rather narrow and deep, the bottom of which being coated with horn, would prevent the edge of the knife rising therefrom. This groove should be on the reverse or concave side of the instrument, with a closed extremity; its figure somewhat resembles Mr. Stanley's catheter, its curvature being of small extent, rather increased towards the extremity, so as to enable the operator to feel its projection plainly *in perinæo*,—a thing by no means difficult in spare persons. A sight is also placed on the handle to denote the proper position of the staff. After the first incision, accordingly, the surgeon feels for the extremity of the groove, opens it, and completes at once the internal incision, by cutting from without inwards, and slightly upwards towards the membranous portion of the urethra, which, at the same moment, releases the director. By the employment of this staff, the operation by the knife is rendered safe, even in hands not over expert; and as the director will measure the extent of the incision, it can be accomplished at two, or, at most, three strokes of the scal-

pel; and should it be necessary to enlarge the wound in the bladder, another staff of greater length could be introduced, and the incision continued in exact correspondence with the preceding.

SUBCUTANEOUS VASCULAR NÆVUS

CURED WITH AN OINTMENT OF

TARTARIZED ANTIMONY.

By W. C. Worthington, *Esq.*, *Lowestoft.*

In a Number of The Lancet published in April last, was inserted an account of a case of vascular nævus, by Mr. C. Hickman, cured by the application of a liniment composed of tartarized antimony and olive oil.

At the time that case came under my observation, the parents of an infant had applied to me for the cure of a subcutaneous vascular nævus, situate on the right side of the chest, just below the axilla, in size a little exceeding a shilling. An insuperable objection was evinced, on the part of the mother, to its removal by excision. In accordance, therefore, with the successful treatment cited in The Lancet, I determined upon trying the adhibition of the tartarized antimony, in the form of ointment instead of liniment.

The surface of the nævus was rubbed but a very few times before it was covered with pustules, which soon became confluent, and it was subsequently removed by the assistance of poultices. Granulations soon sprang up, which were, now and then, smeared with the argentum nitratum. Simple adhesive plaster was then applied as a dressing. The cure is now complete, nothing remaining but a superficial cicatrix.

I consider it due to Mr. Hickman that this cure should, through the instrumentality of your journal, be made known, as I deem it corroborative of the value of that gentleman's mode of treating nævus; and, moreover, whenever the situation of the disease will admit of the application of the remedy, I consider it preferable to the several other plans usually pursued; inasmuch as, when compared with the caustic, it is more under the control of the surgeon, equally efficient and more certain in its operation than vaccination, and much superior to the plan proposed by Dr. M. Hall, being less painful and tedious.

NEW METHOD OF EXTRACTING

THE

STONE FROM THE BLADDER,

BY A PERINEAL INCISION.

(*By* Mariano Pantaleo, *M.D.*)

The modifications which the lateral operation for the stone has already undergone, are almost innumerable; and the present seems one worthy of being added to the number of improvements.

The author first remarks, that the lateral operation is the one which has united the suffrages of the greater number of physicians, and that the only valid objection which can be made against it is, that it does not give a ready passage to large calculi. This inconvenience the author proposes to remedy by making a double incision of the prostate gland, but not after the method of MM. Dupuytren and Sanu. Thus the left moiety of the incision regards the ascending branch of the ischium, as in the common lithotomy, while the other half is directed obliquely upwards, and to the right side.

According to Dr. Pantaleo, it is the superior portion of the prostate gland which offers the greatest resistance to the dilatation of the neck of the bladder wherever the incision is made low down; hence the most rational method is that by which this obstacle is overcome, and it was by following this principle that Martineau, according to the author, obtained his brilliant success.

The bilateral operation, as proposed by M. Dupuytren, has the advantage of giving passage to very large calculi, but is attended with some inconveniences; thus it exposes us to divide the bulb of the urethra, which is so much developed in old subjects, and particularly in calculous patients; or if we approach the incision too close to the anus, in order to avoid it, we run the greater risk of dividing the intestine. The incision of Beclard avoids the bulb, but it is too near the rectum, and not being parallel to the external incision, gives rise to the danger of an infiltration of urine.

Finally, the two incisions practised laterally by M. Dupuytren, leave the superior portion of the prostate gland untouched, and others do not remove the obstacle which has been noticed to the dilatation of the neck of the bladder.

The author's instrument is a double lithotome caché, the blades of which sepa-

rate opposite one another, and to the usual extent. He makes an incision in the ordinary manner along the left side of the perineum, opens the membranous portion of the urethra, and introduces the lithotome along the sound into the bladder. Having estimated the volume of the calculus, the blades of the lithotome are now opened to the proper size, the handle so fixed that the internal incision shall be exactly parallel to the external one, and the instrument is drawn outwards; hence results an inferior incision on the left side of the prostate, and a superior one on the right, or, in other words, the gland is divided by an oblique diameter, running upwards, and from left to right; this, according to the author, gives the most favourably disposed wound for the extraction of a stone; it is very regular, parallel to that of the integuments, and readily dilated.—*For. Med. Jour.*

It is for experience to determine whether the proposed advantages will result from the modification of Dr. Pantaleo.

HERMAPHRODITE.

On Wednesday, the 18th June, we had an opportunity of examining one of these monsters at the *Northern Hospital* (Liverpool), where it exhibited itself; and a more singular or disgusting spectacle we have seldom witnessed. The individual was furnished with certificates from various eminent men both of this country and of the continent, and among others with one from Sir Astley Cooper, stating that it was a good specimen of what is usually called an hermaphrodite, and that he considered it to be a male. It is a native of Saxony, the only child of an officer in the Prussian army, and born in wedlock. The voice and features were those of a man, and the height apparently about four feet nine inches. A light, downy beard covered the upper lip; the mammæ were not developed, and the chest was destitute of hair. The interpreter who accompanied the victim of this extraordinary freak of nature, stated that he was 34 years old, that at birth he was considered to be a female, and that he always dressed as such, and wore his hair turned up, until little more than twelve months ago, when, in consequence of Professors Blumenbach at Göttingen, and Tiedemann at Heidelburg, having some time previously told him he was a man, he assumed the male attire.

On examining the organs of generation, no penis was to be seen, but the *scrotum* was discovered, divided along the median line, the two halves resembling the external labia of the female, somewhat pendulous, and each containing a testis. The part corresponding to the *mons veneris* was not very well developed, and was moderately supplied with hair. On separating the halves of the scrotum (or labia externa), the *glans penis* came into view, resembling a large clitoris, and in the natural situation of the latter organ. It was covered with a prepuce, and had a fissure below, which was imperforate. About an inch lower down, and nearly half an inch to each side of the raphe, were two very small orifices, resembling abrasions of the membrane, and hardly admitting the point of a probe. Still lower, was situated the entrance of a pretty capacious canal, protected at its lower edge by a fleshy bridle somewhat of a semilunar form, which divided it from the perineum. This canal was about three inches long, and terminated in a cul de sac, excepting that at the further end there was a narrow orifice through which, when he was desired to make water, the urine flowed. The scrotal half (or labium) contained a reducible hernia, for which he was operated on by Professor Bach, at Berlin, two years ago, when it first appeared. The testes descended, for the first time, with the hernia. The cicatrix of the operation is still visible, and he wears a double truss.

He has pretty strong [illegible] says that he can perform [illegible] ter, but prefers *jouer le* [illegible] He has nocturnal emissions, also on libidinous ideas being in regard to *either* sex,—the semen from the small orifices below the or glans penis. There was never any discharge resembling the catamenia.

This individual, as Dr. Sillar explained to the gentlemen in attendance, belongs to the fourth class of Sir Everard Home's division (*Phil. Trans.*, 1799), viz. "where there exists a real mixture of the organs of both sexes, although not sufficiently complete to constitute the double organ."—*Liverpool Medical Journal*, July.

HEALTH OF THE TOWN OF LIVERPOOL.—During the month of June, *bowel complaints* have been prevalent, and several fatal cases of *cholera* have occurred. *Small-pox* and *scarlet fever* have also prevailed to some extent, especially the former; and in some cases there has been *ulcerated sore throat*, with fever, but without any eruption, or with an efflorescence so slight as hardly to be perceived. In some instances this has appeared to be contagious, or endemic in certain situations. At the same time there has been a slight increase of simple *continued fever* during the month.—*Ibid.*

RECORD

OF THE

CONCOURS HELD AT PARIS,

IN JUNE 1834,

To supply the Vacancy in the Chair of

CLINICAL SURGERY,

OCCASIONED BY THE DEATH OF BARON BOYER.

(Continued from page 537.)

LECTURE BY M. BERARD.

First Patient.—LUXATION OF THE HUMERO-SCAPULAR ARTICULATION, DOWNWARDS AND FORWARDS.

The first patient presented to M. BERARD (*Fils*) was marked on the back of the thigh with a large cicatrix, the result of a burn carried to the third degree; it was circular in form, but did not exhibit any tendency to the formation of bridles, which the speaker to lay down as a principle, that cicatrices formed without tension, have not the same tendency to the production of bridles and contractions as those which take place with tension. This was not the only patient exhibited another, suffering, and to which the speaker assiduously applied himself. The subject of this case, was a mason, and in descending a ladder, he fell from a height of eight on his left side. On the fall he felt a good deal of pain in the shoulder, and along the arm, but there was no loss of sensation. On examination of the injured limb, the following particulars were remarked, which leave no doubt on the nature of the affection. In the first place, the left arm hangs down by the side, and is longer than the opposite one by six or eight lines. This was ascertained by measuring the distance between the acromion process and the olecranon; the height of the anterior parietes of the axilla seemed increased, and the arm projected from the side about three inches. On examining the axilla, it was easy to distinguish the presence of a solid body in that space. The motions of the joint are extremely limited (here the speaker entered into the study of the motions of the limb, but forgot rotation altogether), and if the surgeon acts upon it with the least force, he gives a great deal of pain. It was impossible to draw the arm away from the side, or to bring it forward without immense suffering to the patient. On pressing the fingers over the surface of the shoulder-joint, a depression was felt on its superior parietes, along which the fibres of the deltoid muscles were drawn, tense and rigid. In the axilla, there was not that hollow which presents itself in a healthy state, but the hand discovered a round, hard tumour, which followed the motions of the arm, and seemed to be continuous with the body of the bone.

The nature of this affection is easily gathered from the preceding symptoms; it is a luxation of the humero-scapular articulation, downwards and forwards. Let us now endeavour to prove that it can be no other lesion than the one which we have indicated. In the first place, we say it is a luxation and not a fracture of the surgical head of the humerus, which sometimes simulates sufficiently a luxation of the joint. (Here M. BERARD enumerated, in a very clear manner, the distinctive symptoms between luxation downwards, and fracture of the neck of the humerus, and particularly insisted on the impeded motion and absence of crepitation in the present case.) It is not a fracture of the neck of the scapula, an accident which might have been easily produced by the manner in which the patient fell on his shoulder; for if that were the case, it would not be a matter of any difficulty to establish the existence of crepitation. How is this luxation produced, and what is its mechanism? The shoulder-joint may be dislocated in two ways, i. e., under two different circumstances. In some cases the ligament and capsule surrounding the joint are extremely lax, either constitutionally or in consequence of some disease, and when the arm is abducted, the simple contraction of the deltoid and supra-spinati muscles is sufficient to make the head of the bone slip out of the ill-protected joint, and produce luxation. This, however, is a very rare accident, and in our patient there is no presumption of the parts being in this state of laxity and weakness. More frequently, the individual, receiving a fall on his side from some height, the arm is extended and receives the shock; at the same time, the different muscles which pass from the trunk to the body of the bone contract violently, the arm is acted upon by a mechanical power, and the head of the bone is drawn down into the axilla. This effect arises from the nature of the joint, the violence, and the contraction of the muscles, all combined. The arm, in fact, is made to represent a kind of lever; the resistance is in the articulation, the power is at the insertion of the pectoral, latissimus dorsi muscles, &c., and the fixed point is that which happens to strike against the ground. Now as the distance between

rate opposite one another, and to the usual extent. He makes an incision in the ordinary manner along the left side of the perineum, opens the membranous portion of the urethra, and introduces the lithotome along the sound into the bladder. Having estimated the volume of the calculus, the blades of the lithotome are now opened to the proper size, the handle so fixed that the internal incision shall be exactly parallel to the external one, and the instrument is drawn outwards; hence results an inferior incision on the left side of the prostate, and a superior one on the right, or, in other words, the gland is divided by an oblique diameter, running upwards, and from left to right; this, according to the author, gives the most favourably disposed wound for the extraction of a stone; it is very regular, parallel to that of the integuments, and readily dilated.—*For. Med. Jour.*

It is for experience to determine whether the proposed advantages will result from the modification of Dr. Pantaleo.

HERMAPHRODITE.

On Wednesday, the 18th June, we had an opportunity of examining one of these monsters at the *Northern Hospital* (Liverpool), where it exhibited itself; and a more singular or disgusting spectacle we have seldom witnessed. The individual was furnished with certificates from various eminent men both of this country and of the continent, and among others with one from Sir Astley Cooper, stating that it was a good specimen of what is usually called an hermaphrodite, and that he considered it to be a male. It is a native of Saxony, the only child of an officer in the Prussian army, and born in wedlock. The voice and features were those of a man, and the height apparently about four feet nine inches. A light, downy beard covered the upper lip; the mammæ were not developed, and the chest was destitute of hair. The interpreter who accompanied the victim of this extraordinary freak of nature, stated that he was 34 years old, that at birth he was considered to be a female, and that he always dressed as such, and wore his hair turned up, until little more than twelve months ago, when, in consequence of Professors Blumenbach at Göttingen, and Tiedemann at Heidelburg, having some time previously told him he was a man, he assumed the male attire.

On examining the organs of generation, no penis was to be seen, but the *scrotum* was discovered, divided along the median line, the two halves resembling the external labia of the female, somewhat pendulous, and each containing a testis. The part corresponding to the *mons veneris* was not very well developed, and was moderately supplied with hair. On separating the halves of the scrotum (or labia externa), the *glans penis* came into view, resembling a large clitoris, and in the natural situation of the latter organ. It was covered with a prepuce, and had a fissure below, which was imperforate. About an inch lower down, and nearly half an inch to each side of the raphe, were two very small orifices, resembling abrasions of the membrane, and hardly admitting the point of a probe. Still lower, was situated the entrance of a pretty capacious canal, protected at its lower edge by a fleshy bridle somewhat of a semilunar form, which divided it from the perineum. This canal was about three inches long, and terminated in a cul de sac, excepting that at the further end there was a narrow orifice, through which, when he was desired to make water, the urine flowed. The right scrotal half (or labium) contained a reducible hernia, for which he was operated on by Professor Bach, at Dresden, three years ago, when it first appeared. The testes descended, for the first time, along with the hernia. The cicatrix left by the operation is still visible on the left labium, and he wears a double truss.

He has pretty strong sexual desires, and says that he can perform in either character, but prefers *jouer le rôle de la femme*. He has nocturnal emissions, and emissions also on libidinous ideas being excited with regard to *either* sex,—the semen flowing from the small orifices below the clitoris or glans penis. There was never any discharge resembling the catamenia.

This individual, as Dr. Sillar explained to the gentlemen in attendance, belongs to the fourth class of Sir Everard Home's division (*Phil. Trans.*, 1799), viz. "where there exists a real mixture of the organs of both sexes, although not sufficiently complete to constitute the double organ."—*Liverpool Medical Journal*, July.

Health of the Town of Liverpool.—During the month of June, *bowel complaints* have been prevalent, and several fatal cases of *cholera* have occurred. *Small-pox* and *scarlet fever* have also prevailed to some extent, especially the former; and in some cases there has been *ulcerated sore throat*, with fever, but without any eruption, or with an efflorescence so slight as hardly to be perceived. In some instances this has appeared to be contagious, or endemic in certain situations. At the same time there has been a slight increase of simple *continued fever* during the month.—*Ibid.*

RECORD

OF THE

CONCOURS HELD AT PARIS,

IN JUNE 1834,

To supply the Vacancy in the Chair of

CLINICAL SURGERY,

OCCASIONED BY THE DEATH OF BARON BOYER.

(Continued from page 537.)

LECTURE BY M. BERARD.

First Patient.—LUXATION OF THE HUMERO-SCAPULAR ARTICULATION, DOWNWARDS AND FORWARDS.

The first patient presented to M. BERARD (*Fils*) was marked on the back of the thigh with a large cicatrix, the result of a burn carried to the third degree; it was very irregular in form, but did not exhibit any tendency to the formation of bridles, which led the speaker to lay down as a general principle, that cicatrices formed on the side of extension, have not the same tendency to the production of bridles and retractions, as those which take place on the side of flexion. This was not the only injury; the patient exhibited another, much more interesting, and to which the speaker immediately applied himself. The patient, in this case, was a mason, and while ascending a ladder, he fell from a considerable height on his left side. On getting up he felt a good deal of pain in that side and along the arm, but there was no loss of sensation. On examination of the injured limb, the following particulars were remarked, which leave no doubt on the nature of the affection. In the first place, the left arm hangs down by the side, and is longer than the opposite one by six or eight lines. This was ascertained by measuring the distance between the acromion process and the olecranon; the height of the anterior parietes of the axilla seemed increased, and the arm projected from the side about three inches. On examining the axilla, it was easy to distinguish the presence of a solid body in that space. The motions of the joint are extremely limited (here the speaker entered into the study of the motions of the limb, but forgot rotation altogether), and if the surgeon acts upon it with the least force, he gives a great deal of pain. It was impossible to draw the arm away from the side, or to bring it forward without immense suffering to the patient. On pressing the fingers over the surface of the shoulder-joint, a depression was felt on its superior parietes, along which the fibres of the deltoid muscles were drawn, tense and rigid. In the axilla, there was not that hollow which presents itself in a healthy state, but the hand discovered a round, hard tumour, which followed the motions of the arm, and seemed to be continuous with the body of the bone.

The nature of this affection is easily gathered from the preceding symptoms; it is a luxation of the humero-scapular articulation, downwards and forwards. Let us now endeavour to prove that it can be no other lesion than the one which we have indicated. In the first place, we say it is a luxation and not a fracture of the surgical head of the humerus, which sometimes simulates sufficiently a luxation of the joint. (Here M. BERARD enumerated, in a very clear manner, the distinctive symptoms between luxation downwards, and fracture of the neck of the humerus, and particularly insisted on the impeded motion and absence of crepitation in the present case.) It is not a fracture of the neck of the scapula, an accident which might have been easily produced by the manner in which the patient fell on his shoulder; for if that were the case, it would not be a matter of any difficulty to establish the existence of crepitation. How is this luxation produced, and what is its mechanism? The shoulder-joint may be dislocated in two ways, i. e., under two different circumstances. In some cases the ligament and capsule surrounding the joint are extremely lax, either constitutionally or in consequence of some disease, and when the arm is abducted, the simple contraction of the deltoid and supra-spinati muscles is sufficient to make the head of the bone slip out of the ill-protected joint, and produce luxation. This, however, is a very rare accident, and in our patient there is no presumption of the parts being in this state of laxity and weakness. More frequently, the individual, receiving a fall on his side from some height, the arm is extended and receives the shock; at the same time, the different muscles which pass from the trunk to the body of the bone contract violently, the arm is acted upon by a mechanical power, and the head of the bone is drawn down into the axilla. This effect arises from the nature of the joint, the violence, and the contraction of the muscles, all combined. The arm, in fact, is made to represent a kind of lever; the resistance is in the articulation, the power is at the insertion of the pectoral, latissimus dorsi muscles, &c., and the fixed point is that which happens to strike against the ground. Now as the distance between

the power and prop is measured by nearly the whole length of the arm, the head of the bone must be drawn down with very considerable force, and we can thus understand why luxations are so often produced in this manner. In the case which now occupies our attention, the capsular ligament is lacerated, and the head of the bone may be felt in the axilla. Is there an incomplete luxation?—Here the speaker entered into some considerations on this species of dislocation, and commenced by denying the existence of that which Sir A. Cooper has described. He supported, however, the idea of an incomplete luxation; and affirmed that authors record numerous examples of it, but that in the present case the luxation was complete, the head of the bone resting on the neck of scapula. M. Berard now gave a rapid sketch of the anatomy of the joint, its muscles and ligaments, and then asking what circumstances favoured the dislocation, remarked that it is infinitely more frequent than any of the others, and that the courses contributing to its production are, first, the little depth of the glenoid cavity; secondly, the immense extent and variety of the motions of the upper extremity; and, thirdly, the power of certain muscles inserted near the head of the bone, as the great pectoral, the teres major, latissimus dorsi, &c. Besides, the lower portion of the capsular ligament is very little protected by tendons or muscles. The only one which we have in this situation is the long head of the triceps, and this does not offer any great protection.

M. Berard now proceeded to describe the accidents which may accompany or complicate luxation of the shoulder-joint, and spoke, in turn, of fracture, effusions of blood, paralysis from pressure on the nerves in the axilla, &c.; and remarked, that the present case was free from any unpleasant complications of this kind, the sensation and motion being quite perfect. The luxation was therefore simple, and easily recognised. We may now ask, he said, what would take place if it were not reduced. The head of the bone is gradually drawn up by the contraction of the muscles, and ascends under the great pectoral, to be lodged below the clavicle; the articulation itself becomes altered, and in time effaced. Besides these, other changes take place; the cartilage covering the head of the humerus is absorbed, and the surface on which the bone rests forms a new kind of articulation called the false moveable joint. In other cases the head of the humerus may unite with the bone upon which it rests, the vessels may become continuous from one structure to the other, and true anchylosis take place.

The prognosis of the injury depends on the extent of these different changes, and the manner in which the motion of the limb is altered. In all cases, the motions are more or less circumscribed, and in some there is no possibility of communicating to the limb the least change of position. In one remarkable instance, the head of the bone was driven in between the ribs, and rested upon the pleura; the preparation is still preserved at the school of Berlin. Up to what period may we hope to reduce a luxation? In the lectures of M. Dupuytren, which have been lately published, we find a table of luxations, reduced from the earliest period to two years, but M. Berard thinks that reduction is in general impossible after three or four weeks. Here the speaker noticed the exaggerated account given by authors of the immobility of the limb in cases of luxation; the fact is, for the first day or two the limb, as in the present case, presents a great degree of motion in almost all directions, and if we were to look for fixity as an essential symptom, we should often fall into error. The prognosis is favourable; first, because the dislocation is recent, and one easily reduced; and, secondly, because it is not accompanied by any accident or complication.

Now comes the principal question, that of treatment. The indications are simple, and easily seized. We have to reduce the luxated extremity, and combat any inflammatory symptoms which may appear. As to the instruments formerly employed for the reduction of luxations, we shall only say of them that they are old and bad, and need never be had recourse to. Sir A. Cooper describes a method which is very easy and simple; the patient is placed on his back on the ground; the surgeon places his heel in the axilla, makes extension by drawing the limb towards him, and uses his heel also to guide the bone into the socket. A principle much insisted on by Sir A. Cooper, and which deserves particular attention, is to devise some means of drawing off the patient's attention, and thus taking the muscular system by surprise, at the moment we are about to reduce the joint; this is often indispensably necessary, and M. Berard has imitated the English surgeon with great success. But we should speak of the preparatory treatment to which the patient is to be submitted; if the luxation be of long standing, and very difficult to reduce, or if the patient be nervous, we must first employ certain general means, before we have recourse to mechanical force. In the first class we may place general blood-letting, proportioned to the age and strength of the patient, and

drawn from a large orifice; this may be repeated if necessary, and other measures proper to weaken the muscular strength of the patient employed; hot-baths continued for several hours are also useful, and we may imitate with advantage the practice of the English surgeons who give frequently repeated doses of tartar emetic, not to produce vomiting, but merely to keep up nausea, and this is a powerful means of reducing muscular force.

M. Berard now proceeded to describe, at length, the manner of reducing the dislocation with which his patient was affected. As to counter-extension, he adopts the views of Boyer. In speaking of extension, he examined with some minuteness the most proper point for applying it, and concluded in favour of extension made above the elbow, as recommended by the English surgeons, instead of the practice commonly followed in France, where the force is applied to the humerus indirectly, through the medium of the forearm and elbow-joint. The speaker here took an opportunity of combating the advice given by many authors, of drawing the limb in a direction the reverse of that by which it passed out of the joint; this, said M. Berard, is a very irrational doctrine, and is not, moreover, supported by experience. As the action of the muscular system is in most cases the cause of dislocation, and of the difficulty experienced in reducing the bone, nothing is more proper to excite contraction of the muscles, and, consequently, increase the difficulties already existing, than to make extension in a line opposite to the direction of the chief muscles which act on the displaced bone; hence M. Berard prefers the method of reduction lately described by Dr. Malgaigne, to all others; he has now tried this method on six occasions at the hospital St. Antoine, and always succeeded in reducing the dislocation with a facility and readiness which no one that had not witnessed the operation could imagine. This method consists in elevating the arm as much as possible, and drawing the head of the bone upwards, in the direction of the fibres of the deltoid muscle; by this means the deltoid, pectoral, and other muscles surrounding the joint, are not irritated or put on the stretch; we have, consequently, very little muscular contraction to overcome, and the head of the bone is easily drawn on a level with the glenoid cavity, and enters without the slightest difficulty. M. Berard had lately an opportunity of testing the efficacy of this method, in a case of much difficulty, where the reduction had been twice in vain attempted by Boyer's manner, seconded by a general bleeding, warm-bath, and other preparatory measures.

Having treated this part of his question at much greater length than we propose to give, M. Berard concluded the history of the case, by examining the accidents which may supervene after reduction of the dislocation, and the care which the patient may demand at this period.

Second Patient.—Fistula of the Cheek.—Immobility of the Jaw.

The second patient submitted to the examination of M. Berard was affected with a fistulous orifice in the left cheek, the result of gangrene following a fever, by which he had been attacked at the age of ten years; the patient had also suffered from a scorbutic affection, which contributed to render the gangrene more dangerous. He now presents a buccal fistula, capable of containing the little-finger, and communicating between the cheek and interior of the mouth. The jaw-bones are in close connexion with each other, and it is impossible to separate the corresponding teeth more than two or three lines. The inferior maxillary bone on the left side seems atrophied, and the masseter muscle is also considerably diminished in bulk. It does not appear that the duct of Steno is interested in the disease and obliterated. When that is the case, M. Berard remarked that whenever the patient eats, the surface of the cheek is covered with an abundant liquid secretion, and becomes red and elevated in temperature, and he named one of his relations who exhibited this phenomenon after having been affected with an inflammation of the parotid gland, which terminated in obstruction of the duct. In this case there are manifestly two indications which present themselves to the surgeon; one, to close, if possible, the fistulous orifice, the other to restore the mobility of the maxillary bone. To fulfil the first, M. Berard proposed the taliacotian operation, or the method proposed by M. Roux of St. Maximin, which consists in making two parallel incisions from the lower border of the wound towards the chin, turning up the flap, and joining it to the edges of the fistula, which are to be previously pared. It is to the latter operation that M. Berard gives the preference.

The second indication will be fulfilled, by placing between the teeth two metallic plates parallel to one another, and capable of being separated by the action of a screw. This apparatus had been already employed for two days; but the speaker took occasion to remark, that it was employed on the healthy side of the jaw, and

demonstrated that it would be much more rational and efficacious to use it on the side of the injury.

Here the hour for terminating the lecture surprised M. Berard before he had time to investigate the causes of this immobility of the jaw, and many other interesting questions connected with the case.

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*LECTURE BY M. LISFRANC.**

Nothing could exceed the enthusiastic manner in which M. Lisfranc was received by the crowded auditory in the amphitheatre on assuming the chair alloted to the candidate who is to speak. He seemed much affected by the testimonies of affection shown to him by the two thousand students; and, after a few words expressive of his gratitude for these tokens of kind feeling, he commenced the lecture on his two patients.

First Patient.—Injury of the Liver and Peritoneum, from a kick.

The first patient whom we had to examine, Gentlemen, was a man 45 years of age, now lying in the Salle St. Martha, No. 44, at the *Hôtel Dieu*. He enjoyed excellent health up to the day of his accident; he is strong in body and of a bilio-sanguineous temperament; his person does not present any traces of his having been affected by any anterior malady. Four days ago he received a violent contusion on the abdomen from the kick of a horse which threw him immediately on the ground; there was no loss of consciousness, however, attending the fall, and this should be kept in mind as a matter of importance in tracing up the history of this accident, and endeavouring to arrive at a correct diagnosis of the case.

The man, as I said, was not deprived of motion or consciousness, but was able to get up without experiencing anything except some pain in the neighbourhood of the contused part, which was not very severe or distressing. The symptoms succeeding the injury did not present at first anything of an alarming nature, but to-day he was attacked with accidents of a violent character. He was seized with frequent vomiting, ejecting a porraceous matter, no doubt arising from what he had eaten, mixed with a viscid secretion from the stomach; this was of a dirty-green colour, and was not stercoral, at least I do not think so. The abdomen was painful, tumid, &c. He also complains of a pain ascending from the right hypochondriac region to the shoulder; he is affected with a short dry cough, and his bowels are obstinately confined. Our first care was to make an attentive examination of the abdomen, particularly about the region which had been the seat of the injury. The belly was considerably distended and developed, particularly about the right hypochondriac region. Whence arose the tumefaction? Was it produced by an effusion of liquid into the cavity of the peritoneum, or did it arise from the presence of a gaseous matter? Here is a question which deserves our attention, let us, therefore, proceed to examine it.

In order to clear up any doubt which might exist, we had recourse to percussion of the abdomen, a means of great utility in many cases of injury as well as disease. One hand was placed on one side of the abdomen, while with the other we practised percussion over the different points of the parietes on the opposite side. This manœuvre gave no indication of the presence of a liquid, and when we employed pressure on the abdomen, we did not hear that gargouillement which is characteristic of gaseous matter in the intestines. The sound produced by percussion was clear, like that rendered in cases of tympanitis. (Here M. Lisfranc entered into a minute examination of the different effusions which may take place into the cavity of the abdomen in consequence of external violence, and laid down in a clear manner the several symptoms by which they are accompanied and distinguished.) External violence, acting on the parietes of the abdomen, may give rise to various accidents, of a more or less severe nature, and the effusion of fluid which results may be either primary or secondary. Sometimes we have a rapid effusion of blood or other fluids, when an intestine, the stomach, &c., or a large vessel, has been severely injured and lacerated; at other times the effusion is slow and secondary, either because the viscus has been only partially injured, or, perhaps, because a small and narrow opening has been made in the parietes of a great vessel, giving rise to a small bleeding, &c.

But before pursuing this inquiry further, let us ask whether our patient is affected with peritonitis; I would say no; or if it exist, it is very partial and insignificant. You know that when inflammation of the peritoneum exists to any extent and is fully developed, the abdomen is always painful on pressure; the least touch is insupportable, and the patient is incommoded

* Surgeon-in-Chief at the Hospital of La Pitie.

even by the weight of a fine coverlet; but in the present case we have no abdominal pain of this kind; there is, indeed, a little sensibility about the umbilicus, but not enough to excite any apprehension. At the right hypochondriac region, however, we find a different state of things; here there is a good deal of pain upon pressure, some tumefaction, and it is very probable that the peritoneum may be partially inflamed; the liver may be felt large and engorged, projecting a good deal beyond the free edge of the ribs; but when carefully examined by the touch, we did not feel any inequality or trace of rupture; the sound over this portion of the abdomen is dull, and the matity extends to the part of the chest above the liver, which also appears developed.

The patient feels, as we said, some pain extending up the chest to the right shoulder; he has also a short dry cough, and his skin presents a yellowness of colour that is by no means habitual to him. Since the receipt of his accident he has been very costive, and his stools have presented a white clayey colour; this change of colour in the excrementitious contents of the intestine has been too much insisted on as a sign of inflammation of the liver; for although in the latter case the secretion of bile is suspended, and the feces are often white, we have seen many examples of inflammation of the liver in which the stools were of a yellow, or even reddish colour. We were unable to procure any of the patient's urine in order to try, as we desired, if it contained any traces of bile, and in default of this proof must lay more stress on the yellowness of skin which we have already noticed.

The patient has received a violent injury over the region of the liver; we may therefore naturally ask, Is this viscus lacerated, and has blood been effused into the cavity of the abdomen? Experience shows that accidents may give rise to deep and extensive lacerations of the liver, spleen, kidneys, or other organs contained in the abdominal cavity. I do not think that the liver has been ruptured, because severe symptoms must have instantly followed an injury of this nature, which was not the case with our patient; we should in the first place have had effusion of blood, and then of bilious matter, into the peritoneum, as is proved by the autopsy of persons who have died from similar accidents, and you know how soon the serous membrane resents the presence of these fluids. If the intestinal canal had been injured, we should in all probability have effusion of fecal matter into the abdominal cavity, and violent inflammation would have been the immediate and inevitable consequence; or in case the injury was not very extensive, we might merely have a discharge of blood by stool. Surgeons say that when the blood evacuated is liquid, we have a proof that the canal is injured low down; on the contrary, a discharge of solid coagulated blood is a symptom of the injury having taken place higher up, near the stomach; but this is a very uncertain distinction; besides, we should remember that bloody stools may be a consequence of simple irritation of the mucous membrane, and do not strictly imply the existence of laceration. Was the stomach of our patient injured by the violence which he received? I think not. He never complained of that burning heat which patients commonly feel when the stomach has been severely injured; besides, he would have had vomiting at once after the accident, and the matters rejected would have been mixed with blood; this latter symptom is characteristic of laceration or injury of the stomach.

The spleen does not seem to have been injured; we have no pain or tumefaction about that region; and as to functional symptoms, we cannot expect to have any. (Here the speaker entered into a little digression on the function of the spleen.) The spleen, you know, is not a viscus, and though it probably is in some way connected with digestion, its function is not yet known; an animal lives very well after the spleen has been removed; this experiment has been frequently tried by M. Magendie, and it is said that man may equally live and do well without it. Have we, finally, an injury of the kidneys? No, Gentlemen. The distinctive marks of this accident are totally absent. One of our judges has shown that, in cases of diseased kidney, the pain is very violent, and is particularly situated in the bladder, and often at the extremity of the penis, so that the patient thinks he is affected with stone in the bladder, and, indeed, he frequently presents all the rational symptoms of stone, as bloody urine, suppression of the discharge, acute pain in the bladder, &c. We might push our examination to all the parts contained in the cavity of the abdomen, and show by exclusion that they have not been affected, but the time, which is fast running away, does not permit longer details. I shall only remark, that the absence of marks of contusion on the parietes of the abdomen is not sufficient to prove the absence of the lesions of which we speak, for one may, and does often, exist without the other.

To hasten then to a diagnosis, I think that our patient is affected with an inflammatory congestion of the liver and of

the peritoneum in the neighbourhood of this viscus, produced by the violence under which he suffered; and that, in all probability, the inflammation extends, but in a milder degree, to the umbilical region.

What prognosis do we form of the case? If the liver have been lacerated by the blow (and I do not think so for the reasons already given), the patient will certainly die; but I think, with proper care and attention, a cure may be attained. The terminations, Gentlemen, of inflammation of the liver are various. (Here M. LISFRANC spoke at some length on the different modes in which inflammation of the liver may terminate.) The inflammation may abate and terminate by resolution within six or eight days, as in other parts of the body. It may increase in violence, suppuration may be established, and an abscess be formed in the substance of the liver; of this the effects are very various, according to the position of the abscess. Death is often the result; the abscess may open externally, and the patient get well; in other cases it makes its way to the neighbourhood of the stomach, or penetrates the diaphragm, and is discharged through the bronchiæ. In some rare cases gangrene has followed inflammation of the liver; but the most ordinary termination, and that which we have most to apprehend, is chronic induration of the substance of the gland, vulgarly known under the name of obstruction.

We cannot follow up each of these terminations in the way we could wish. Let us then turn to the therapeutic part of our present case. The diagnosis has been laid down in inflammation from an external cause; I would insist peculiarly on this latter circumstance as one of high importance, because we may push our sanguineous evacuations much further when this is the case, than when the inflammation has arisen from an internal cause.

Much has been written on the effects of blood-letting, but many most essential points have been neglected. When we have an inflammation arising from an internal cause, this often stamps the affection with a character of feebleness and depression which has not been too well studied by physicians or surgeons, and which ought to induce them to manage the strength of the patient with the utmost caution. Inflammation arising from an external cause, or, as it may be called, traumatic, is more local, and free from this constitutional complication, which forbids us to push bleeding with too great freedom.

Experience amply supports these ideas; I would appeal to military surgeons, by many of whom we are surrounded, if they have not remarked this difference of the efficacy of blood-letting in traumatic inflammations, and I can quote my own practice in all severe injuries. However, this general rule must undergo some modifications in application; thus, in inflammation of the brain, though abstraction of blood is decidedly beneficial, we must be cautious not to push it too far, lest we bring on, by excessive depletion, a predominance of the nervous system, which it is very difficult to subdue. In inflammatory affections of the chest you may push bleeding to the utmost extent; you may bleed again and again, until you have left, as it were, only enough of blood in the system to support life, especially if the inflammation be of a traumatic nature. But if you have to treat a patient affected with an inflammation of the peritoneum, or any of the principal viscera in the abdominal cavity, whether arising from an internal or an external cause, you must be guarded in the quantity of blood which you extract; and this for an additional reason. The patient is depressed, the force of his heart is already considerably diminished, and his strength completely gone; hence he will not bear venesection like a patient in pleurisy; besides, during inflammation of the intestinal canal, the great work of digestion, a function so essentially necessary to health, is deranged or disturbed; gas and other secretions are formed in quantity and imbibed; these affect the constitution, and if we add copious bleeding to the debilitating causes which already exist, an adynamic state may be produced, from which the patient never recovers. The possibility of this inhibition of gas, which many may doubt, is to me proved by the peculiar fetidity of the pus secreted by certain abscesses about the anus, although they have no direct communication with the gut.

As to the propriety of employing local bleeding, we are told by surgeons to give the preference to leeches whenever we have to combat an inflammation of the membranous tissue, for by this means we act more directly and energetically on the capillaries of the part; however this may be, I see no reason for preferring local to general bleeding in the present case, because we have an inflammation of the peritoneum lining the surface of the liver and of the parenchymatous tissue which enters into the composition of the viscus.

I would, therefore, said M. Lisfranc, practise at first one or two general bleedings, and wait to see the effects produced by this abstraction of blood before proceeding further; if the patient became

more weak, depressed, colourless, &c., I would have recourse to other antiphlogistic measures; if, on the contrary, he bore the operation well, it might be repeated according to circumstances. But here a question of considerable importance presents itself: Is it a matter of indifference in what part of the body we practise the bleeding? (Here the speaker entered into an examination of the ideas entertained by the older surgeons on the propriety of revulsive bleedings, and concluded that many of them were supported by experience.) As the object of the first bleeding is merely to reduce the quantity of blood and thus strike the inflammation directly, it is of little consequence whether it be practised in the arm or lower extremity, but I would direct all the subsequent ones to produce merely a revulsive effect, that is, I would practise them as far as possible from the organ affected. It is to this practice that we may chiefly attribute the fortunate results obtained during the treatment, at the *Grenier d'Abondance*, of the wounded during the 5th and 6th of June. After the general bleeding, I should advise the application of leeches to the right hypochondrium, according to the principles established by M. Broussais for membranous inflammations.

The patient should also have lavements administered occasionally, and take from time to time some emollient drink, with a gentle narcotic to calm the vomitings, which are merely of a nervous nature. Cooling acidulated drinks would also be proper, or, if the stomach be too irritable to support the fluid, slices of lemon to allay the thirst; a large emollient cataplasm should be applied to the abdomen, over the region of the liver, taking care that its weight do not determine any pain; finally, a most advantageous means is the employment of a general bath, neither hot nor cold, in which the patient should remain for several hours. Such is the treatment I would adopt, joined, of course, to a strict observance of diet. In general, the inflammation is subdued by perseverance in the means just noticed, but should it continue, and pass to the chronic stage, what are we to do? Here, Gentlemen, it is necessary to establish certain distinctions. This second stage will either be accompanied by pain, or not. In the latter case we may have recourse to discutients, internally and externally, such as mercurials, &c. In the former we may have the formation of pus and abscess in the substance of the liver. (Here M. Lisfranc gave a concise history of abscesses of the liver, and of their surgical treatment.) When the abscess is once formed, it may open, as I before remarked, into an intestine, or may even make its way through the diaphragm, and be discharged through the lungs; of this we have several observations. However, when the fluid presents externally, we should be very careful to avoid a mistake, which has happened more than once, where the gall-bladder was opened instead of an abscess. You should bear in mind, that in cases of abscess the tumour is generally smaller than when it arises from engorgement of the gall-bladder; it is also preceded by more violent and long-continued shiverings; and, finally, the edges of the tumour, if arising from a collection of pus, are hard at the circumference, and this is given by surgeons as the best sign whereby to distinguish them. As soon as the abscess points externally, we are recommended to evacuate it by an incision, but in case no adhesions have taken place, so as to isolate the tumour completely, this may give rise to very severe and dangerous accidents; hence we should have recourse to the practice proposed by M. Recamier, which consists in opening the tumour by means of caustics; adhesion is thus excited in the neighbouring tissues, and the pus evacuated without accident.

We might enter into several other questions connected with this case, but the time warns us to turn to our second patient.

Second Patient.—Exostosis of Sternum and end of Clavicle, joined to a Lymphatic Tumour.

This was a man, forty-four years of age, who, according to the account which he gave, enjoyed excellent health until about eighteen months ago. His parents also have always been healthy; he has two children, one of whom, a girl, is very delicate, and from what he says, is affected with some scrofulous symptoms. About a year and a half ago, he was seized with a pulmonary catarrh, but this affected his general health very slightly; he never had any engorgement of the lymphatic glands, &c.

About ten months ago, he perceived, for the first time, two tumours on the anterior and superior part of the chest. One of these was moveable, for we questioned him particularly on this point, and he says he could move it on the parietes of the thorax. The other tumour, which was much smaller, commenced over the sternum; this, from its origin, was solid, adherent, and not moveable like the former. The tumours gradually increased, and were soon confounded together, as usually happens in cases of this kind. At first he

experienced violent lancinating pains in the part; but for the last month or six weeks he has been free from all pain or uneasiness. This, however, proves nothing decisive (I make the remark en passant), because we know that in cancer we may have the most violent pain for months, which goes off for a time, and returns again, or perhaps leaves the patient altogether. The lymphatic ganglia situated above the clavicle, are much developed, and also those in the axilla on the left side; they are hard, enlarged, and moveable, but they do not give rise to any inconvenience. He has, moreover, an augmentation of the volume of the sternum near the right sterno-clavicular articulation. This tumour is very hard, immoveable, and solid; but the skin rolls over its surface, and is not, consequently, adherent. The abdomen does not seem to be quite free from disease, the mesenteric glands are enlarged; the pressure with the hand gives a good deal of pain. Perhaps there is some ulceration in the small intestines, because the patient is alternately costive and troubled with diarrhœa. I was, however, unable to procure his stools for examination.

We have thus several affections presenting themselves together for examination in this patient; we have a tumour of a compound nature on the chest; an affection of the sterno-clavicular articulation; mesenteric engorgement; abdominal pain; and, very probably, chronic inflammation of the small intestines. Let us first occupy ourselves with the tumour on the chest. It is as large as two fists united together, and the integuments covering it are very moveable in all directions; they are marked by several cicatrices, resulting most probably from irritating applications which had been made at an early period of the disease. The tumour itself is adherent to the sternum, and cannot be moved in any direction; in some part of its surface it is very hard and solid, in others it gives quite a contrary sensation; there is no fluctuation, but a peculiar softness like that of the spleen, or a lipomatous tumour beginning to degenerate. The colour of the skin is altered; in some places it is dark-brown, and in others reddish. We shall now endeavour to show what is the cause and nature of this tumour; what may be its termination; and what mode of treatment is applicable. After which we will speak a few words on the state of the abdominal organs, and on the sterno-clavicular articulation.

The exciting causes of tumours of this kind are in general very difficult to ascertain; in the present case, however, I think it was of a scrofulous nature, and is still so, though in a state of degeneration, I am inclined to say a scrofulous origin, from the development of the glands in the axilla of the opposite side, from the constitution of the patient, and his habit of body. In reference to the latter I would remark, that there are two classes of scrofulous patients quite distinct; one presenting the ordinary characters which you find in all books; the other class marked by a narrow chest, small limbs, thinness of body; the skin, instead of being fair and white, is brown, and the glands are much engorged; this is what Alibert calls scrofula of the country, and our patient belongs to that class. It is a point of great importance to decide whether the tumour may not arise from an aneurysm of the arch of the aorta. But we have none of the characteristic symptoms of this dangerous affection. We have not that great bruissement which attends the entrance of blood into the aneurysmal sac. Besides, in an aneurysm of this size we should have had absorption of the sternum and ribs, &c. which has not taken place; besides, there is no pulsation in the tumour; I examined it with the utmost attention and found none; the absence of pulsation might indeed arise from the formation of a clot at the entrance of the aneurysmal cavity; but this is only a momentary obstacle, which is soon removed, and the pulsations return with their original force. (Here M. Lisfranc spoke at some length on the causes which give rise to the mistake of a sanguineous tumour for one of another nature, and quoted several examples where aneurysms had been thus opened with the bistoury.) In the present case the manner of development shows the tumour is not aneurysmal. (M. Lisfranc now proceeded to show by the method of exclusion that it was not a varicose tumour, a cyst, a lipoma, &c., and concluded that the disease was compounded of an exostosis of the sternum and end of the clavicle, joined to a lymphatic tumour, and gave it as his opinion that the cancerous degeneration had commenced in this compound structure.)

As to the treatment, Gentlemen, that is a very difficult question. An operation seems to present but small chances of success, from the complication of abdominal disease and the general bad health.

Here the close of the allotted hour arrived, unexpectedly to M. Lisfranc, and he could not terminate his lecture on this difficult and interesting case. According to report, the jury are rather inclined to regard the tumour as of a fibrous nature, than as an exostosis.

THE LANCET.

London, Saturday, July 12, 1834.

COMMUNICATIONS are still forwarded to us from all parts of the country, couched in terms of strong reprehension of the CORONER'S BILL now before Parliament. It will be recollected that a verbatim copy of the document itself was published by us in THE LANCET of the 21st of June, consequently the Bill has been examined by the members of the medical profession, and the result seems to be a general condemnation of its provisions. A correspondent, who for many years has taken a deep interest in this subject, asks, "whether it would not be advisable to convene meetings of the profession in order that the House of Peers might be petitioned against the Bill?" In reply to this question, we may state, that from what has already transpired in the Upper House relative to this measure, that such a proceeding is not necessary, and, probably, is not advisable. The Bill has not one zealous supporter in the House of Lords, it moves, therefore, at only a tortoise-like speed before that assembly, and from what has already transpired, it is certain that it will be sent back to the House of Commons (that is, presuming that it should be returned at all to the lower assembly), an entirely altered document, or, at least, the main features of the Bill will be so changed that its old friends will be incapable of discovering any points which could enable them to recognise it, as the measure which had been read a "third time" in the House of Commons. We may remark too, that several of the Peers have insisted that the remuneration clauses must be changed, contending that the existing allowances made to coroners are sufficiently remunerative of their official labours. Twenty shillings for an inquest, and ninepence per mile travelling expenses, constitute a sufficient reward, probably, for the services of attorney coroners. But if men qualified for discharging the duties belonging to the office of coroner were made to fill that office, were required by law to preside over courts of inquisition; we believe, if the present rate of payment were doubled, the public would be the chief gainers by the alteration; and this after all is the consideration which should guide our legislators in their decision. As the coroner's office is now conducted, it is for the most part an useless institution.

The principle, which led to its first establishment, remains, of course, as pure, patriotic, and as popular as ever, but the frame-work and details of the executive department, by rendering what ought to be the governing principle inoperative, subvert the very purposes which the Coroner's Court was designed to accomplish by our intelligent, far-seeing ancestors. At that period the science of medicine was unknown in England, and, consequently, no provision was made for rendering the principles and practice of that science subservient to the authority and utility of the Coroner's office. But it is not our object on this occasion to go into any inquiry regarding the utility of the Court of Inquisition, because the usefulness of the office under a proper system of government is acknowledged by every man who is capable of forming a correct opinion with reference to the maintenance of the judicial privileges of the community. As Coroners are elected by the people, so was the Coroner's office especially designed to protect the interests of the people, — to shield the weak against the tyranny of the strong,—to guard the peaceful citizen against the fury or unbridled rage of the cruel agent of power,—to trace out the first

steps of crime, and thus relieve the innocent from the curse of undeserved suspicion, and impose upon the guilty the last and most weighty responsibilities of the law. When viewed under such impressions,—when estimated with reference to what this office is actually *capable* of achieving for the public, it must be acknowledged that there has not been handed down to us by our forefathers a single institution which demands from us a higher share of admiration and confidence. But the abuses of this office are most glaring, and the defects in administering its functions are numerous and almost disgusting. Who then can observe without dismay, that a new bill has been introduced into Parliament relating to Coroners, without containing a single clause which entitles the measure to the approbation or support of any one man who is conversant with the details of the subject to which the measure is designed to refer? That such a defective miserable document was certain of eliciting, not only the disapprobation, but also the indignation of the profession, it was reasonable to predict. And now that the measure has been examined, and is thoroughly understood, there is not a single member of the profession who would hesitate to make a personal or pecuniary sacrifice, rather than allow such a monstrous piece of imbecility and incongruity to become the law of the land.

Independently of the obnoxious provisions of several clauses of the bill, there are many passing indications which are calculated to produce a well-founded confidence that this measure will at no period receive the Royal assent; and that its passing the two Houses of Parliament during the present session is in the highest degree improbable. The dissolution of the GREY Ministry is not an event which is at all calculated to facilitate the progress of this measure, or to relieve the two legislative Assemblies from that heavy pressure of public business which has proved so embarrassing to their proceedings. Under these circumstances we are not disposed to recommend that meetings of the profession should be called for the purpose of petitioning the Lords against the bill; but we would earnestly advise every medical practitioner to keep a watchful eye on the movements of Parliament with respect to this bill; and should an attempt be made to carry the measure through the House in its present ill-constructed condition, let all the influence which it is in the power of the profession to make be exercised so as to dissuade the Peers from sanctioning a bill which might be productive of much mischief, but which can never prove an instrument of benefit to any portion of the community.

Present appearances certainly would seem to justify us in believing that nothing more will be heard of the Coroner's Bill during the present session of Parliament. It does not follow, however, that because the enemy is not seen, that he is either dead or has taken a final flight. Hence, prudence admonishes us to remain at our posts, and to be at all times prepared for a renewal of the conflict.

AN action, in which Mr. PURSELL, a highly-respectable surgeon and apothecary residing at Stockbridge, in Hampshire, was plaintiff, was lately brought against Messrs. STEPHENS and MOAT, the printer and proprietor of the *Christian Advocate*, a London weekly newspaper, for a libel contained in an advertisement inserted in the number of that journal for October 7, 1833, by Messrs. MORISON and MOAT, quack medicine venders, of the New Road, London. The defendants in the first instance pleaded "a justification," but a few days before the action was appointed to be

tried, with drew that plea from the record, and suffered judgment to go by default. On Tuesday last a jury assembled in the Court of Common Pleas, Guildhall, to settle the amount of damages, when FIVE HUNDRED POUNDS were awarded to the plaintiff. We shall probably publish a brief report of the proceedings as they occurred in court, in the next number of this Journal. MORISON, we are informed, pays upwards of SEVEN THOUSAND POUNDS a year to Government for the three-halfpenny stamps with which his boxes of trash are plastered! What must be the character of that Legislature which thus submits to be bribed into a toleration of a system so disastrous to the public health, and which, if it were a little more widely extended, would complete the ruin of the medical profession, as it has already proved the disgrace of medical science in this country? If the sale of "secret remedies" is not abolished by law, no new enactment for effecting medical reform will possess the value of the paper on which the clauses are written.

PARLIAMENTARY COMMITTEE. — The following is a list of witnesses who have been examined by the Medical Committee since Friday last:—

Drs. FLETCHER, I. A. ROBERTSON, and SHARPEY, of Edinburgh.

Professors T. THOMSON and R. LEE; Drs. CORKINDALE and SMALE, and Mr. BUCHANAN, of Glasgow.

Professor CLARKE, and Drs. HENDERSON and DAVIDSON, of Aberdeen; and Professor BRIGGS, of St. Andrew's.

INTERCEPTED LETTERS.

[THE LECTURE ON MIDWIFERY DELIVERED BEFORE THE MEDICAL COMMITTEE.]

"DEAR SIR HENRY, — Having been accidentally at the board-room of St. George's Hospital, it was hinted to me that I should be examined by the Medical Committee, as they considered me to be at the head of the *Accoucheur* department. I think it but respectful towards you, who hold so prominent a situation in the classical and scientific atmosphere of this country, and whose moral example is so duly estimated, though not always followed, by your professional brethren, to state what I think I ought to say on this important occasion, and I am also confident that your extended experience and great tact may suggest to me some appropriate, and at the same time delicate, answers to the interrogatories which the committee may make.

"I anticipate being asked how it was that I became a licentiate of your College, —in fact, by what *means* I got a degree.

"Now it does not appear to me necessary to expose the precise nature of all your kind offices with the ARCHBISHOP OF CANTERBURY, and the difficulties we had to overcome in getting his HOLINESS brought over to *our* ways of thinking. I therefore propose to state to the committee, that you, my kind friend, some years ago, were good enough to say *that it would be acceptable to the College of Physicians if I were to become one of their members, and that you did me the honour to invite me to become a licentiate of the College*, abandoning my own former college—the College of Surgeons. And I must say that I consider the event to be one of the chief of my life; it is one which has given me the *highest* personal gratification.

"It is also probable that I shall be asked, besides, what is the honour attached to being a licentiate of the College of Physicians,—what advantage I receive in practice from being *a licentiate of that College*.

"I will then state, that at the commencement of my education (which was exceedingly imperfect) I should have thought it no greater honour to be a licentiate of the College of Physicians than a Fellow of the College of Surgeons; but circumstanced as I was in later life, and invited, *without application on my part*, to become a licentiate of the College of Physicians, I did consider it to be an exceeding great honour to be a member of one of the most learned bodies in this country.

"With regard to pecuniary considerations, it was a positive loss; for until I had the honour of being invited to the College of Physicians, I performed a variety of operations, none of which I should think it right to perform now. The public must suppose, that since I have had a Lambeth degree, my knowledge of such

things is lost, and, therefore, if the gaps in my practice had not been filled up by physic (there are no gaps at all in surgery), I should have been minus so much income as would have been gained by my practice as a surgeon. All this I can state conscientiously, my dear Sir Henry, for though the whole world knows that I recommend my nephew to do everything surgical that may come to the shop, no one can suppose that I do not derive a fair per-centage for it.

"Next I will proceed to give the Committee a description of the term 'midwifery,' and on that I will read them a long lecture, and so bamboozle them in the course of it, that they shall make neither head nor tail of what I state. *Any* man may write intelligibly, if he only understands what he is to write about; but I aspire to something beyond that. The accomplishments that are within reach of *any* man are not worth having. For my part I have, by great industry and hard labour, acquired such flippancy in the use of words, that I can speak for an hour and a quarter, and afterwards defy *any* man either to repeat what I have said, or express what I meant. For example, suppose I am asked by one of the wise-acres of the Committee, whether I am a midwife; I will say 'No; I am a man-midwife.' Then they will say, perhaps, 'What do you consider to be included in the term *midwifery*?' In the answer to that, I will be a little prolix, explaining that prolixity is necessary, and declaring, that if the Committee will give me leave to state, I consider the act of midwifery not merely to comprehend the superintendence of a function in which nothing is required, and, consequently, concerning which, nothing is to be done, but to involve the management of a great number of cases of great difficulty—of great danger—of cases in which, if treated rightly, life is preserved, and, if treated improperly, is destroyed. It may be right to state, that the process of human parturition is very different from the process of parturition in other animals. I will then go on literally to say, that in order to obviate the effects of gravitation, the cavity through which the contents of the womb have to pass, is not placed in the same line with the trunk of the body in the human subject, as it is in other animals; and the price which is paid for the advantage of the erect posture of the body, is in proportion to the increase of the difficulty, and of the danger attendant upon parturition. Cases of the most simple kind, which are included under the head of natural labour, are by watchfulness, care, and doing but little, attended with little hazard; but these cases, without watchfulness, without care, or with obtrusiveness, may be converted into cases of the greatest hazard. Thus I will proceed, my dear Sir Henry, and then I will proceed to state, that the act of labour is made up of a resistance to be overcome, and a power capable of overcoming it; and that the last should beat the first; but this does not always occur; the resistance is then greater than the power, and, consequently, it becomes necessary either to increase the power by artificial means, or, in cases of disproportion between the cavity and the body which has to pass through it, either to lessen the volume of the body which has to pass through, or to sacrifice the life of the woman to preserve the life of that body, the child. It is a settled axiom, that the head of a child, which in its short diameter, taking case with case, measures four inches, cannot pass through a cavity which measures less than three, without a diminution of its size. A diminution of its size can only be effected by lessening the quantity of its contents, namely the brain; and I need not say, th[illegible] move the contents of th[illegible] the brain, you destroy [illegible] son to whom that [illegible] appears, then (I sh[illegible] cases of difficulty a[illegible] pend upon the di[illegible] body which has [illegible] cavity through [illegible] pass, are cases w[illegible] tion, much anat[illegible] rate powers of [illegible] major and the m[illegible] to the determinati[illegible] be sacrificed, and [illegible] should be sacrificed[illegible] half an hour, the diffi[illegible] of an hour, determines [illegible] the practitioner should destr[illegible] life to preserve the life of its mo[illegible] opening its head, or whether he shall adopt such other means, I mean the employment of time, especially, as may possibly justify him in waiting without operating. I shall then go on to tell them that there are other cases, and, to lengthen the yarn, shall say, that in the greater number of instances, the presentation of the child is by its head; but that in once out of seventy times, it happens that other parts than the head, such as the shoulder, the back, or the breast, will present themselves; and that it is perfectly impossible that a body so presented can pass through that cavity, unless the nature of that presentation be changed.

"Don't think, my dear Baronet, that I shall stop here. By no means. My zeal is

not of the half-and-half kind. I shall, I assure you, proceed as follows: Gentlemen (I shall say), if a case be ignorantly treated, or mistaken, there is no question but that of life or death. If the case be known and treated, but not treated skilfully, an accident of the most fatal nature, namely, a rupture of the uterus, a communication made between the cavity of the abdomen and the external air, is effected by the improper performance of such operation, and the life of the woman is devoted. There *are* cases, and they are not unfrequent, of hemorrhage occurring in labour. Some of those cases of hemorrhage depend upon the opposition of the placenta to the opening at the bottom of the womb, or as it is called, the *os uteri*. In those cases the first part of the process, which involves the dilatation of that opening that opens the door through which the child is to pass into the world,—this natural act, that in 99 cases out of 100, or a much larger proportion, is to give an opening through which the contents of the uterus are to be discharged,—as it proceeds, involves the patient in a state of positive and imminent danger. r the body which is so placed, consists ollection of bloodvessels, which being rough, the life of the child is sa- by the loss of blood, and the would either die undelivered, or l die of hemorrhage after that So that in such a case, it be- essary actually to make a per- y the hand through such pla- mass, and to deliver the child he opening so made, in order to the further certain consequence n-performance of such an opera- and that certain consequence is

I think this will bother the committee not a little; and they will say, 'Such a learned man as this can only belong to a college that deserves our protection.' Perhaps some member will still doubt this. For such an emergency I will be prepared, and will carry my lecture a little further. I will then proceed thus: — Gentlemen (I will say), in labours the most natural, in women of weak powers, it very often happens that hemorrhage takes place from bloodvessels, and that such hemorrhage becomes the cause of death. It is very well known to physicians and surgeons, and, I may say, to physiologists and philosophers in general, that the restriction of hemorrhage in the body is attributed to two causes, namely, to the coagulation of the blood, which forms a plug in the bleeding vessel, and to the contraction of the bloodvessels, which obliterates their cavity. It is obvious that the blood cannot coagulate unless it be at rest; it is equally obvious, that it cannot be at rest in a large vessel, where the pressure behind would prevent it. Here, therefore, is given to the uterus of the woman, and to the uterus of the woman only, a muscular power, the contraction of the uterus itself, by the exertion of which muscular power the sides of the vessels are compressed against each other, so that that which could not happen by a mere contraction of the bloodvessel itself, is effected by the contraction of the muscular fibres which surround the bloodvessels, producing and making a specific ligature on each bleeding vessel, of the thickness of the uterus itself. This is the provision of nature given by Providence to the human uterus; it is not given to the uterus of any other animal, since the structure of the placenta in other animals is so formed, that while one part comes away, another part remains behind. It is quite obvious, that the knowledge of the mode of restraining hemorrhage, by producing the contraction of the bloodvessels, by forwarding the coagulation of the blood, and especially by producing contraction of the uterus itself, is of infinite importance to everybody who has the care of the act of parturition; and a vast number of women are lost every year by the ignorance of persons upon this subject. There is but another case, that which has been called 'convulsion,' 'puerperal convulsion,' because it is unlike any other convulsion in some of its circumstances. Such cases, in ignorant practice, almost always end fatally; but, in good practice, almost all end well; and the like may be said with regard to the cases of hemorrhage. A bad practitioner will lose nineteen out of twenty of his cases of hemorrhage; a good practitioner will hardly ever lose a case, though he may live to a considerable age. Another danger presents itself, and in cases the most natural. It happens very often that the placenta, or connecting medium between the mother and the child (it is as well, my dear Sir HENRY, to make the subject *rather* clear to the Committee, wherefore I occasionally give these little dictionary explanations), this medium (I shall say) is situate at the upper part of the bag called the uterus. If an ignorant practitioner forcibly draws down the funis when the uterus is relaxed, and before the placenta is separated, he draws down with it the uterus itself, making that an external tumour which was an internal cavity, and either destroying immediately the life of the patient by such violence done to parts incapable of bearing it, or producing a permanent disease which is inconvenient,

things is lost, and, therefore, if the gaps in my practice had not been filled up by physic (there are no gaps at all in surgery), I should have been minus so much income as would have been gained by my practice as a surgeon. All this I can state conscientiously, my dear Sir Henry, for though the whole world knows that I recommend my nephew to do everything surgical that may come to the shop, no one can suppose that I do not derive a fair per-centage for it.

"Next I will proceed to give the Committee a description of the term 'midwifery,' and on that I will read them a long lecture, and so bamboozle them in the course of it, that they shall make neither head nor tail of what I state. *Any* man may write intelligibly, if he only understands what he is to write about; but I aspire to something beyond that. The accomplishments that are within reach of *any* man are not worth having. For my part I have, by great industry and hard labour, acquired such flippancy in the use of words, that I can speak for an hour and a quarter, and afterwards defy *any* man either to repeat what I have said, or express what I meant. For example, suppose I am asked by one of the wise-acres of the Committee, whether I am a midwife; I will say 'No; I am a man-midwife.' Then they will say, perhaps, 'What do you consider to be included in the term *midwifery?*' In the answer to that, I will be a little prolix, explaining that prolixity is necessary, and declaring, that if the Committee will give me leave to state, I consider the act of midwifery not merely to comprehend the superintendence of a function in which nothing is required, and, consequently, concerning which, nothing is to be done, but to involve the management of a great number of cases of great difficulty—of great danger—of cases in which, if treated rightly, life is preserved, and, if treated improperly, is destroyed. It may be right to state, that the process of human parturition is very different from the process of parturition in other animals. I will then go on literally to say, that in order to obviate the effects of gravitation, the cavity through which the contents of the womb have to pass, is not placed in the same line with the trunk of the body in the human subject, as it is in other animals; and the price which is paid for the advantage of the erect posture of the body, is in proportion to the increase of the difficulty, and of the danger attendant upon parturition. Cases of the most simple kind, which are included under the head of natural labour, are by watchfulness, care, and doing but little, attended with little hazard; but these cases, without watchfulness, without care, or with obtrusiveness, may be converted into cases of the greatest hazard. Thus I will proceed, my dear Sir Henry, and then I will proceed to state, that the act of labour is made up of a resistance to be overcome, and a power capable of overcoming it; and that the last should beat the first; but this does not always occur; the resistance is then greater than the power, and, consequently, it becomes necessary either to increase the power by artificial means, or, in cases of disproportion between the cavity and the body which has to pass through it, either to lessen the volume of the body which has to pass through, or to sacrifice the life of the woman to preserve the life of that body, the child. It is a settled axiom, that the head of a child, which in its short diameter, taking case with case, measures four inches, cannot pass through a cavity which measures less than three, without a diminution of its size. A diminution of its size can only be effected by lessening the quantity of its contents, namely, the brain; and I need not say, that if you remove the contents of the skull, namely, the brain, you destroy the life of the person to whom that brain belonged. It appears, then (I shall continue), that those cases of difficulty and of danger which depend upon the disproportion between the body which has to pass through, and the cavity through which that body has to pass, are cases which require great attention, much anatomical knowledge, accurate powers of comparison between the major and the minor, great judgment as to the determination whether life should be sacrificed, and which life of the two should be sacrificed. The difference of half an hour, the difference of a quarter of an hour, determines the fact whether the practitioner should destroy the child's life to preserve the life of its mother, by opening its head, or whether he shall adopt such other means, I mean the employment of time, especially, as may possibly justify him in waiting without operating. I shall then go on to tell them that there are other cases, and, to lengthen the yarn, shall say, that in the greater number of instances, the presentation of the child is by its head; but that in once out of seventy times, it happens that other parts than the head, such as the shoulder, the back, or the breast, will present themselves; and that it is perfectly impossible that a body so presented can pass through that cavity, unless the nature of that presentation be changed.

"Don't think, my dear Baronet, that I shall stop here. By no means. My zeal is

not of the half-and-half kind. I shall, I assure you, proceed as follows: Gentlemen (I shall say), if a case be ignorantly treated, or mistaken, there is no question but that of life or death. If the case be known and treated, but not treated skilfully, an accident of the most fatal nature, namely, a rupture of the uterus, a communication made between the cavity of the abdomen and the external air, is effected by the improper performance of such operation, and the life of the woman is devoted. There *are* cases, and they are not unfrequent, of hemorrhage occurring in labour. Some of those cases of hemorrhage depend upon the opposition of the placenta to the opening at the bottom of the womb, or as it is called, the *os uteri*. In those cases the first part of the process, which involves the dilatation of that opening that opens the door through which the child is to pass into the world,—this natural act, that in 99 cases out of 100, or a much larger proportion, is to give an opening through which the contents of the uterus are to be discharged,—as it proceeds, involves the patient in a state of positive and imminent danger. For the body which is so placed, consists of a collection of bloodvessels, which being torn through, the life of the child is sacrificed by the loss of blood, and the woman would either die undelivered, or she would die of hemorrhage after that delivery. So that in such a case, it becomes necessary actually to make a perforation by the hand through such placenta or mass, and to deliver the child through the opening so made, in order to prevent the further certain consequence of the non-performance of such an operation; and that certain consequence is death.

"I think this will bother the committee not a little; and they will say, 'Such a learned man as this can only belong to a college that deserves our protection.' Perhaps some member will still doubt this. For such an emergency I will be prepared, and will carry my lecture a little further. I will then proceed thus: — Gentlemen (I will say), in labours the most natural, in women of weak powers, it very often happens that hemorrhage takes place from bloodvessels, and that such hemorrhage becomes the cause of death. It is very well known to physicians and surgeons, and, I may say, to physiologists and philosophers in general, that the restriction of hemorrhage in the body is attributed to two causes, namely, to the coagulation of the blood, which forms a plug in the bleeding vessel, and to the contraction of the bloodvessels, which obliterates their cavity. It is obvious that the blood cannot coagulate unless it be at rest; it is equally obvious, that it cannot be at rest in a large vessel, where the pressure behind would prevent it. Here, therefore, is given to the uterus of the woman, and to the uterus of the woman only, a muscular power, the contraction of the uterus itself, by the exertion of which muscular power the sides of the vessels are compressed against each other, so that that which could not happen by a mere contraction of the bloodvessel itself, is effected by the contraction of the muscular fibres which surround the bloodvessels, producing and making a specific ligature on each bleeding vessel, of the thickness of the uterus itself. This is the provision of nature given by Providence to the human uterus; it is not given to the uterus of any other animal, since the structure of the placenta in other animals is so formed, that while one part comes away, another part remains behind. It is quite obvious, that the knowledge of the mode of restraining hemorrhage, by producing the contraction of the bloodvessels, by forwarding the coagulation of the blood, and especially by producing contraction of the uterus itself, is of infinite importance to everybody who has the care of the act of parturition; and a vast number of women are lost every year by the ignorance of persons upon this subject. There is but another case, that which has been called 'convulsion,' 'puerperal convulsion,' because it is unlike any other convulsion in some of its circumstances. Such cases, in ignorant practice, almost always end fatally; but, in good practice, almost all end well; and the like may be said with regard to the cases of hemorrhage. A bad practitioner will lose nineteen out of twenty of his cases of hemorrhage; a good practitioner will hardly ever lose a case, though he may live to a considerable age. Another danger presents itself, and in cases the most natural. It happens very often that the placenta, or connecting medium between the mother and the child (it is as well, my dear Sir HENRY, to make the subject *rather* clear to the Committee, wherefore I occasionally give these little dictionary explanations), this medium (I shall say) is situate at the upper part of the bag called the uterus. If an ignorant practitioner forcibly draws down the funis when the uterus is relaxed, and before the placenta is separated, he draws down with it the uterus itself, making that an external tumour which was an internal cavity, and either destroying immediately the life of the patient by such violence done to parts incapable of bearing it, or producing a permanent disease which is inconvenient,

and not to be removed but by the removal of the uterus itself. Those cases I have seen happen again and again. It occurs sometimes (and there is an instance upon record of a man who was tried at the Old Bailey for such practice) that the practitioner, not aware of that which he has done, has continued to drag until he has torn the uterus out of the body, bringing with it the intestines and parts contained in the cavity of the belly—you know what the *belly* is, Gentlemen—and the patient has died. There is yet another case, which, if not constituting what may be called the act of labour—Gentlemen, you know what *labour* is—may be considered fairly as being the prelude of labour; I mean the ordinary case of abortion. If the oak is valuable as an oak, the acorn is valuable which produces it; and therefore, as far as human life is concerned, cases of abortion are of as much importance as cases of labour. But it is notorious to persons who practise this part of the profession, that all those cases are met by ignorant practitioners with a remedy of one colour, and that colour red. They are met by a combination of medicines of three different kinds, so that you know, before you see the prescription, what a patient has taken. Those cases demand great knowledge; they may arise in weak habits and in strong habits; they may depend upon the loss of the vitality of that which is within the uterus, and they may be irretrievable; or they may depend upon the separation of the ovum from the uterus, which separation may be partial only, and, by judicious treatment, may only remain partial, or they may depend upon the contraction of the uterus, the walls of which organ contracting upon its contents, may work its expulsion; all these cases (different in themselves) require management also very different. I think I have stated enough to show the importance of that part of the profession which professes to superintend the function of child-bearing, and the necessity which there is for examining into the qualifications of persons who are to superintend the function, in whatever department of the profession they may happen to be.

"Believe me yours, sincerely,

"C. M. C."

"DEAR SIR CHARLES,—Upon the whole I am rather pleased with what you propose to state to the Committee, but I send you back your letter for you to revise it. You surely will not have the effrontery to state that I *invited* you to become a licentiate of our Royal College, and that it was *acceptable* to us for you to join our learned body. It may appear that this is a misapprehension or *misconception* on your part; but these obliquities of mind, however easily they may pass in another corporation, will be suspected in a body so distinguished as ours for its moral feeling and dignified character. But I do not detract from the merit of your dramatic description of midwifery. The whole, at the same time, is playful and physiological, and the parts are so twisted and involved, that I defy WARBURTON, or any of his clique, to unravel the web which you have constructed. I confess it is perfectly incomprehensible to

"Your faithful but mystified friend,

"H. H.

"London, ——— 1834."

PROVINCIAL MEDICAL ASSOCIATION.

"Hos ego versiculos feci, tulit alter honores."

To the Editor of THE LANCET.

SIR,—As the next meeting of the Association takes place on the 18th inst., I trust to your known impartiality for the insertion of the following in the next Number of your valuable periodical, and am, Sir, your obedient servant,

GEORGE SHEWARD.

Upton-upon-Severn, July 6, 1834.

To the Members of the PROVINCIAL MEDICAL AND SURGICAL ASSOCIATION.

Gentlemen,—In the last volume of the "Transactions" of your Association, is the report of a case of a foreign body found in the heart of a child who died, some time since, at Baughton, in this neighbourhood; and as the author of that case has, in my opinion, been deficient in good faith towards me, I shall take the liberty of making a few observations upon the subject.

In the first place I distinctly state, that although the case is published by "Thos. Davis, Esq., surgeon, Upton-upon-Severn," not a tithe of what is there printed was *written* by him, and that the notes, on which such report was founded, were furnished by me, and received by Dr. Hastings in my handwriting. I was desired by the Hon. W. Coventry, in whose service the father of the boy was, to be present at the opening of the body, in consequence of what he considered the extraordinary nature of the case, Mr. Davis having asserted that the boy had recovered from the accident, and sunk under an attack of ague! No mention of this is made in the report, or of the treat-

ment for the cure of this supposed disease. I saw Mr. D. previous to the examination, and meeting Mr. Coventry in the road, I requested him to accompany us. From the slight mention made of my name in the report, none of the readers of it would, for one moment, suppose that the examination was performed by me, yet such was the fact, Mr. D. having requested me to make it,—*why*, I leave you to suppose,—merely saying that the instruments provided by him to open the chest of the *child*, and I pledge my honour to prove the fact, were a *butcher's saw* and a *small chopper*!!

On my return home, I was requested by Mr. Davis to draw up a report of the case, which I declined, but on being much pressed by him, I wrote down the anatomical appearances, which notes, even in their rough state, were sent to Dr. Hastings. On my calling on that gentlemen, at his request, to explain the details more fully than I had done on paper, these notes were produced, and acknowledged as mine; and when he told me that it was his intention to publish a report of the case, I requested, either at that interview, or in a note I subsequently addressed to him, that he would state whence his information was derived, and by whom the notes were furnished to him. Judge then of my surprise, when, on perusing the case a few days since, I found the very words made use of by me, in the last paragraph, and published as the opinion of Thos. Davis, Esq., surgeon! I state this from no feeling of animosity towards the party alluded to. I take no pride in authorship, or I would have published a report of the case myself; but, however it may suit the *interest* or the inclination of the learned physician to dress up cases for persons who cannot do so for themselves, he can have no right to make use of the materials furnished by others, unless he states the sources from which they were derived, and in the present instance the paper might just as fairly have been ascribed to Mr. Coventry or Mr. Walker, as to the party under whose name it now appears.

Having said thus much on the subject, in justice to myself, allow me to conclude with a few observations on a question which will, I am given to understand, be submitted to your consideration at the next meeting of the Association.

I have always considered that one of the great objects of such associations was, to add to the respectability, as well as to the information, of the profession. If such be indeed the case, how is it that persons who have never received a professional education, and a few years since were exercising their talents on the brute creation, become eligible to practise on the human race, and to be admitted members of your body? And how is it that men, who are considered as standing at the head of the medical branch of the profession, do not hesitate to meet such persons in consultation, and in cases, too, which have generally been considered as belonging especially to the province of the surgeon? Yet such is the case with more than one physician in this neighbourhood, and while it is so, no one can be surprised that young men, who have spent their time in the acquirement of knowledge in a profession which requires more study and attention, and entails upon them a heavier responsibility than any other, feel the inutility of such exertions, when regularly-educated physicians do not hesitate to meet such practitioners as I have described, and to conceal the egregious blunders that daily and hourly occur to them. It may, perhaps, be said that I have done the same thing, but this I deny; I have been called in, and have attended, in more than one instance, not out of the respect I bore to the practitioner, but from a desire to save the patient much misery from maltreatment; and where this has been the case, I have never derived the slightest emolument, because I consider that professional men have a duty to perform above the consideration of fee, perquisite, or reward.

There are other persons in the profession besides myself who have declined becoming members of your Association on this ground alone, and to this source may be traced one of the causes which have operated in producing the cry for medical reform. The remedy is obvious, and as a public association, embracing all classes of the profession, I call upon you to express your opinions on the subject, and while such continues the practice, I would advise the regularly-educated man to dispense altogether with the aid of a physician, and rather trust to the assistance of a brother practitioner, than countenance a line of conduct which strikes at the foundation of the best interests of the profession. I have the honour to be, Gentlemen, your obedient servant,

GEORGE SHEWARD.

Upton-upon-Severn, June 30, 1834.

ST. GEORGE'S HOSPITAL.

AT the last meeting of the Weekly Board, the subject of the proposed appointment of a second assistant-surgeon was resumed. On this occasion

Mr. BRODIE, harassed and perplexed by the opposition which he has met within

the walls of the hospital, and the opprobrium which has been heaped upon his conduct without, made some observations on the subject; but instead of endeavouring to show the propriety of the new appointment, he satisfied himself with accusing the present assistant-surgeon, Mr. Walker, of inattention to his duties in the hospital.

Mr. WALKER, in reply, boldly denied this charge, and directed attention to the jealous feeling with which Mr. Brodie had prevented those duties from devolving on him (Mr. Walker), which he (Mr. Walker) was, notwithstanding, fully adequate to perform, and which it might have been for the benefit of the patients had they been performed by other persons instead of Mr. Brodie.

Dr. WILSON, Mr. FULLER, Mr. STONE, and some other individuals interested in the welfare of the hospital, are using every laudable means to extinguish the system of jobbing, which has been so disgracefully carried on by some of the medical officers; and many of the lay governors have expressed their intention cordially to co-operate in putting a stop to this system, which has for its support, besides Mr. Brodie, those two renowned physicians, Seymour and Macleod, who, from their moral and physical resemblance, and their similarity of pursuits, have been, not unappropriately, denominated by the students the "SR. GEORGE'S TWINS."

THE NEW ASSISTANT-SURGEONCY JOB.

To the Editor of THE LANCET.

SIR,—In my last letter I announced to you the approaching perpetration of Mr. Brodie's disreputable job at our hospital. Since then the general meeting (of which the last number of THE LANCET contained an account) has been held, and Mr. Keate's motion for a second assistant-surgeon has been carried, by a very small majority indeed, but yet carried sufficiently to answer the purpose and end of the scheming projectors of it. Your readers may, perhaps, wish to know who the signers of the requisition calling this meeting (exclusive of the surgical officers) were. Mr. Powell is, I regret to say, a member of that body whose rights and privileges you have always strived so nobly to uphold. He is a general practitioner, and most commonly one of the noisiest members of the Weekly Board. Mr. Gaskoin combines the practice of a *pure* and a general practitioner, somewhere in Clarges-street, and was, to use his own words, fairly "kidnapped" into the thing. He was sent for to the hospital, taken into the Board-room, and told to sign the requisition, he all the time (as a friend has assured me) firmly believing the thing had been mutually agreed upon, for the benefit of the hospital, between the assistant-surgeon and the surgeons. This gentleman is another of Mr. Brodie's dear friends, whom he occasionally pats on the back; and as a proof of it I may mention, that some months ago, a butcher was admitted into the hospital, in Fitzwilliam Ward, with a very bad leprosy, under the care of Mr. Brodie, who, on examining the case, candidly owned that he did not understand "skin diseases," and that he should request this same Mr. Gaskoin to see him. Mr. Gaskoin did see him, and came to the hospital regularly twice or three times a week during the whole time he was in, and prescribed for him,—Mr. Brodie never interfering in or doing anything for the case at all, and the man went out perfectly cured by such simple treatment as venesection and the sulphuret of antimony; and this is the way in which Mr. Brodie performs his duty; and by such an example as this does he profess to train up young sucking assistant-surgeons in the way they should go. The thing is a perfect farce, and a disgrace to the hospital.

For some weeks previous to the meeting, it was remarked that Mr. Brodie was more attentive to his hospital duties (coming at the regular days and hours), and was much more affable and kind to the students than he had been for some time—the cause of all this was easily surmised. This continues still, and most probably will do so, as long as the necessity for it remains. His satellites follow his example, with a degree of cautious dissimulation which has been, doubtless, instilled like mother's milk into them.

When the governors assembled, it was at once discovered that the greatest exertions had been made by the Brodie party to obtain as large a majority as possible—they bristled up like quills upon a porcupine. Mr. Walker had, very properly, endeavoured to make the appointment of assistant-physician and assistant-surgeon two separate points of debate; but the opposite party would not listen for one moment to such an arrangement—they would have them considered as one and the same question, and why? Because they knew that the appointment of an assistant-physician was one, in the propriety of which most of the governors were agreed, and they fondly hoped that this would strengthen their forlorn proposal of an assistant-surgeon. It did so, and to this circumstance, and this circumstance only, is the majority they gained to be as-

cribed. This is only one instance among many of the deep, designing, artful conduct that was practised on the occasion. Then why did Mr. Keate bring forward the motion? Because Mr. Brodie commanded him to do so, and because Mr. Brodie was ashamed to act, the dirty work was handed over to his *dependant* to do. Then, Sir, as to the fact that Messrs. Keate and Brodie harped so much upon—about the benefit that would accrue to the hospital from gentlemen serving the hospital as assistant-surgeons for four years before they are elected full surgeons; why, if the two junior surgeons, Messrs. Hawkins and Babington, who were present, and who heard these remarks, had possessed one spark of proper feeling, they would have sunk into the earth at being thus severely scarified; for it is a well-known fact, that neither of these gentlemen served the office of assistant-surgeon above *four months* previous to their being elected full surgeons. This is another disgraceful fact that ought to see the light. But these gentlemen are under Mr. Brodie's thumb, and they dared neither speak nor move. On the question being pressed upon Mr. Brodie, he remarked that it would be extremely *inconvenient* to define the duties of the assistant-surgeon. It would be very inconvenient to Mr. Brodie, I am sure; for, in defining them, it must be stated that Mr. Walker has generally seen his patients six days out of the seven, when Mr. B. has neglected seeing them himself. Mr. Brodie likewise took the same opportunity of throwing out a very ungentlemanly remark upon Mr. Walker's character and conduct at the hospital; this was such a barefaced thing, that Mr. Walker very properly brought the subject before the Board on Wednesday last, prefacing it by a very strong resolution (which I hope to be able to send you), and demanding a court of inquiry into his conduct. Such bold and spirited conduct rather alarmed Mr. Brodie, and, at the eleventh hour, he publicly apologized to Mr. Walker, in a full and satisfactory manner, before the whole Board. Of the squabble that took place between Dr. Macleod and Dr. Gregory, I will say that it was utterly disgraceful to both parties, and that they can hardly dare show themselves in respectable society again. Every governor, indeed, considers that Dr. Macleod's connexion with the hospital is a stain and a stigma upon it. It is also a well-known fact, that Mr. Fuller was present for the purpose of bringing forward some specific resolution; but on a wink being given by his superior, Mr. Brodie, this gent. slunk out of the room, and did not vote at all; this was noticed by many. Mr. Bramah, Dr. Wilson, and Mr. Stone, spoke their sentiments in a free and gentlemanly style, that formed a strong and striking contrast to the hypocrisy and subservience of the opposite party. But of the numerous governors, private patients, and friends of Mr. Brodie, many of them saw so clearly through the trickery of the whole affair, that notwithstanding all Mr. B.'s bowing and scraping, they declined voting at all.

Previous to the meeting the whole plan had been chalked out, and for many weeks it was noticed that many of Mr. Brodie's embryo assistants went regularly round the wards with Mr. Walker—a thing which they had never done before, and the reason of which was obvious enough. Hole-and-corner meetings were held, and dinners were repeatedly given in Saville Row and Albemarle Street, for the mature arrangements of all their plans. It is notorious that when a gentleman waited on a governor for his vote two days after the thing was publicly known, the answer was, that "*three weeks* before Mr. Keate had engaged the vote for Mr. Cutler." Let the opposite party deny this if they dare.

The new assistant-surgeon, it was well known, was to have had the care of Mr. Brodie's out-patients; but Mr. Walker's spirited conduct has prevented this, and it is understood that he is only to have the out-patients of the two junior surgeons. I am, Sir, your obedient servant,

A GOVERNOR OF ST. GEORGE'S HOSPITAL.

London, July 8th, 1834.

GUY'S HOSPITAL.

OPERATIONS.—REMOVAL OF A GREAT PORTION OF THE UPPER JAW-BONE.

On Tuesday three operations were performed at this hospital by Mr. KEY. As one of the operations was intended for the removal of the greater portion of the superior maxilla, a large number of pupils was collected on the occasion. The first patient who was brought into the theatre had a large steatomatous tumour on the right shoulder. This was speedily removed, as, likewise, was the inferior limb of the second patient, who had an incurable disease of the tarsus. The third case, the one of most interest, was now introduced. The man, John Harlow, is of middle age, and was admitted into the hospital about a fortnight back, with a malignant fungoid

disease of the superior maxillary bone, filling the greater portion of the antrum. It had existed some months, and was gradually enlarging. The disease first commenced in the alveoli. Mr. KEY, from the nature of the case, knowing that death would be the inevitable result if left to itself, resolved upon removing the whole of the diseased part. The patient conducted himself during the operation with the utmost fortitude. In commencing the operation Mr. KEY made his first incision in a curved direction, from the angle of the mouth to the external angle of the orbit. In this first incision, the transverse facial artery was divided, besides other enlarged branches from the facial, which require to be secured. The integuments and muscles were then dissected from the portion of bone to be removed, when a powerful pair of bone nippers were used, first to divide the maxillary bone at the juncture with its fellow, then across the bone through the antrum Highmorianum, carefully avoiding injury of the floor of the orbit. The palatine plate of the palate bone was removed, and, probably, a portion of the pterygoid plate of the sphenoid bone, where it lies at the back of the antrum. The vomer was not injured or disturbed.* A considerable quantity of blood was lost, but not to an alarming extent. The operation was completed in the space of about 20 minutes, with a creditable degree of coolness and firmness.

DR. CLANNY'S COMMUNICATION ON THE BLOOD.—To the Editor of THE LANCET.—Sir,—I find that my amanuensis in transcribing my last paper, inserted in THE LANCET, No. 535, omitted three words which render one of the paragraphs erroneous. Please to favour me by correcting this as soon as convenient, thus,—page 502 of No. 4, line 37, for, "having exactly the same tint as arterial blood," read, "*the blood* having *now* exactly the same tint as arterial blood." Also at page 501, line 23, for "slow," read "slowly." I find, also, that I have inadvertently used the word *free* carbon throughout the whole of my paper, but this is correct only when the results of my *first day's* experiments were given in respect to venal and arterial blood. The word free cannot with propriety be used when I give the results of my experiments upon the subsequent days, for upon those days the blood had undergone some change in vacuo, by which the oxygen gas of the atmospherical air was permitted to remove certain portions of carbon, not the free carbon, which I find circulates in healthy blood generally. I am thus particular that my meaning may not be misunderstood. I remain, Mr. Editor, your obedient servant,

W. REID CLANNY.

Sunderland, July 5th, 1834.

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* The inferior surface of the orbitar plate of the sup. maxilla was found to be entirely free from disease.

CORONER'S BILL."—Thursday, 3 p.m. We have been just informed, that the House of Lords will go into Committee on the Coroner's Bill this evening. Be it so. We shall see what the Peers will make of it.

CORRESPONDENTS.

A counter-memorial of the physicians of the Birmingham Hospital, utterly destructive of the statements contained in the memorial of the surgeons of that institution, has been forwarded to the Chairman of the Parliamentary Committee. A copy of it shall appear in our next No.

Mr. John Adam Paul, of No. 13, Upper St. Martin's Lane, has forwarded to us a letter, in which he says,—"It was stated in your Journal that Mr. Weiss made the forceps for extracting stumps of teeth from Mr. Sheppard's pattern; but the fact is, I made it, and not Mr. Weiss. When I had completed it, Mr. Sheppard took it to Mr. Weiss, and the latter now passes for the manufacturer of a forceps which I made myself. Allow me also to state that the forceps as made by Mr. Weiss is not the forceps I now make, for I have since subjected it to an improvement, which I shall be glad to submit to the inspection of the profession."

We have received a copy of GEORGE GREGORY'S last dying speech and confession, and as it is a very curious document, it shall be inserted, without abbreviation, in the next number of THE LANCET.

It is stated in the newspapers that St. John Long, the once notorious quack, has ceased to live, having, it is reported, died in consequence of hemorrhage from the lungs.

Mr. Jones. The omission ought to be mentioned by letter to "the Chairman of the Committee on Medical Education, House of Commons."—*Mr. Horne's, Mr. Greening's, Mr. Tomkins's,* and *Mr. Clarke's* communications, shall appear as soon as we can find room for them.—The address from *Newcastle-on-Tyne* has been received.—We are *obliged* again to omit the letter of *Delta*,

The *Sunderland Herald* reached us. The refusal of Mr. Harrison, in the contest at the Infirmary, to obtain "the support of newly-made governors," was highly creditable to that gentleman.

C. E. B. The early volumes of THE LANCET contain many of them, and nearly all are to be found in published pharmacological works.

Fair Play. The evidence will appear in good time. The scrap is not worth isolating.

Mr. Handley. No fee would procure the object mentioned. Want of space for that, as well as scores of similar notices, has prevented its appearance.